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Masterarbeit

Ideas and Committing to Ideas in Software Engineering - An Industrial Case Study

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Abstract

Context. Software engineering is creative in nature. Software Engineers generate new ideas in many aspects of their private and professional lives.
Problem. This thesis explores the topic of creativity and new ideas in the context of software engineering.
Objective. We look at the kinds of ideas software engineers have, the factors that influence creativity in software engineers and the factors that support or hinder software engineers in committing to ideas.
Method. We conducted an industrial case study among employees of a medium-sized German software development company. We used interviews as our primary data collection technique. We then extracted relevant information from the interviews via qualitative analysis.
Result. The results showed multiple factors that influence creativity and idea commitment in software engineers. We also found that software engineers create different types of ideas based on their environment and state of mind.
Conclusion. This thesis contributes to the current research. Our results serve as interesting starting points for further research on the topic of creativity and new ideas in software engineering.

Kurzfassung

Kontext. Softwareentwicklung ist von Natur aus kreativ. Softwareentwickler kreieren neue Ideen in vielen Bereichen ihres privaten und beruflichen Lebens.
Problem. Diese Arbeit beschäftigt sich mit dem Thema "Kreativität und neue Ideen in der Softwareentwicklung".
Ziel. Sie erforscht, welche Arten von Ideen Softwareentwickler haben, welche Faktoren die Kreativität von Softwareentwicklern beeinflussen und welche Faktoren dazu beitragen, dass eine Idee weiterverfolgt oder verworfen wird.
Methode. Hierzu wurde eine industrielle Fallstudie mit Mitarbeitern eines mittelständischen, deutschen Software-Unternehmens durchgeführt. Die Studiendaten wurden mittels Interviews gesammelt und dann mit qualitativen Methoden analysiert.
Ergebnisse. Die Ergebnisse zeigen mehrere Faktoren, die die Kreativität von Softwareentwicklern und die Bereitschaft, Ideen weiterzuverfolgen, beeinflussen. Weiterhin zeigen sie, dass die Arten von Ideen von der Umgebung und vom Geisteszustand, in dem sich die Softwareentwickler befindet, abhängen.
Diskussion. Diese Arbeit leiset einen Beitrag zum aktuellen Stand der Forschung. Die gefundenen Ergebnisse stellen einen interessanten Startpunkt für weitere Forschung dar.

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1 Introduction

1.1 Motivation

Software engineering is creative in nature. Specifically, new ideas play an important role in many aspects of the discipline. Software engineers need new ideas when designing software architectures, solving programming problems, and designing user interfaces or databases.

Creativity also plays a vital role in staying innovative in an ever-changing, competitive environment. Mayfield [May11] describe innovation as a subfield of creativity. Without innovation, companies fall behind and cannot stay in business against their competitors. This leads to a rise in interest in research on innovation and, therefore, creativity.

There is a clear lack of research on the topic of creativity and new ideas in the context of software engineering. Graziotin [Gra13] states "[...] there is a lack of knowledge in what creativity is in software development and what its dynamics are." Research in software engineering looks more at the aspects of innovation and knowledge management rather than the creation of new ideas and factors that influence creativity. For example, many studies researched the subject of innovative behaviour. When employees adopt innovative ideas to support their companies, this is called "innovative behaviour". Innovative behaviour includes the developing of ideas as well as sharing and operationalizing them. Operationalization in this context can mean the development of a prototype, the implementation of a new business process or similar steps [MSC16]. However, the focus in studies on innovative behaviour is on ideas that are innovative and have been implemented rather than ideas in general.

Creativity has been the topic of research since the 19th century, although there have been mentions even earlier than that in texts from Northern mythology or the ancient Greeks [Bec11]. Even so, there is still no consensus among scientists on what creativity actually is. The most agreed-upon property of creativity seems to be that it is doing things differently [Cro11a].

Up until recently, psychologists viewed creativity as a domain-independent property of humans. However, there is an increasing amount of research that suggests that creativity is domain-specific to a certain degree. Baer [Bae11] argues that "Creativity-specific skills or traits (such as divergent or associative thinking, resistance to premature closure, openness to experience, or intrinsic motivation) are not domain-general skills of the kind that general intelligence is theorized to be." In this light, domain-specific research on creativity is needed in the field of software engineering to fully understand the factors that influence creativity and new ideas of software engineers.

1.2 Research Objective

This thesis looks into the topic of creativity and new ideas in software engineering. In detail, it explores what kinds of ideas software engineers have and the factors that influence software engineers' creativity. We also want to look at factors that influence idea commitment. I.e. what factors support or hinder software engineers in committing to implement or at least share their ideas.

From this, we derive the following research objectives:

We want to design and execute a study that can be applied to answer the following questions:
RO1 What kinds of ideas do software engineers have, and what factors influence their creativity?
RO2 What factors influence which ideas are committed to being at least shared or implemented?

1.3 Requirements

In addition to the research goals, we define several requirements for the study. These requirements further limit the scope to allow for meaningful results. Requirements limit the population that is researched by the study, as well as the type of study itself. The following paragraphs name all requirements and explain the reasons for introducing them.

1.3.1 Requirement: Specific to Software Engineering

This thesis must be specific to the field of software engineering. Software engineering is cognitive in nature, leading to a high generation of ideas. Software engineers have to develop creative solutions for their problems every day. This behaviour makes them perfect as the subjects for a case study related to idea generation.

Additionally, there is very little research into what kinds of ideas software engineers commit to. Most of the existing research only looks at this question from the standpoint of innovative behaviour (see [MSC16] or [RPP16]).

Several studies addressed the research objectives for a general population (see [RNS10]). However, there does not seem to be any research that deals specifically with the field of software engineering and addresses our research objectives. Software Engineers may come up with different ideas than the general population, and they may also commit to different ideas. Due to the cognitive and problem-oriented nature of Software engineering, it is reasonable to assume that Software Developers might come up with ideas that reflect this way of thinking. Therefore, this thesis aims to find a method specific to the field of software engineering. The questions and the method, in general, are designed to support this requirement.

1.3.2 Requirement: Structurally Applicable to Small and Medium-Sized Companies

Furthermore, we want the study to be structurally applicable to small and medium-sized companies. Large companies often have complex structures that severely limit the impact an individual has on the company's direction. Therefore, the role of creativity is different from small and medium-sized companies, where employees have a more direct mode of impacting their company.

The study also needs to be structurally applicable. In particular, the study must be well documented, and there must be clearly defined steps to reproduce. Given clear documentation and steps to reproduce, future researchers will be able to reproduce the study and adapt it to other small or medium-sized companies.

1.3.3 Requirement: Exploratory

The study needs to be conducted in an exploratory way. This means that it will try to find possible effects that appear in the researched field without trying to explain why they exist. These effects are also not proven in the exploratory research itself. Exploratory research often lays the foundation upon which further research is built. This further research can then be used to support or reject the effects that were found by exploratory research.

We chose this requirement because there isn't a lot of research on creativity and new ideas in the field of software engineering. This study aims to change that by laying the foundation for possible future work to expand our knowledge and understanding in this field.

1.3.4 Requirement: Qualitative Research Methods

Qualitative and quantitative research are two approaches to data collection and data interpretation. Quantitative research focuses on common factors in big sets of data points. Results are viewed exclusively as an aggregation of data points and often displayed as percentages or absolute numbers [NS15].

On the other hand, qualitative research focuses more on individual pieces of data. Sample sizes are usually much smaller than in quantitative research, and data is seldomly aggregated.

Qualitative research gives a more detailed look into a topic at the cost of being less generalizable. Meanwhile, quantitative research gives a broad, generalized view of a specific topic at the cost of missing fine details and factors that depend on the individual research subject.

1.3.5 Requirement: Connection between Generated and Committed Ideas

Another requirement is related to connections in our research goal. Existing research explores factors that influence idea commitment or factors that influence creativity (see [MSC16], [RPP16], [SMR12]). But there is little research on the concrete types of ideas people have, and there is even less research on connections and correlations between those factors.

The study must be able to show connections and correlations between the researched questions if they exist. This holds especially true for connections and correlations between the types of ideas software engineers have and them committing to their ideas.

1.3.6 Requirement: Regular Employees

Our study focuses on regular employees rather than only managers. There is already a wide range of research on how managers can introduce creativity and new ideas into their company (see [Woo03]). However, recent research shows that regular employees can offer significant creative input and introduce innovative methods and improvements to the company [RPP16]. Management positions also only make up a small portion of employees in software engineering. Focussing only on managers would greatly limit the number of available participants and also the number of cases to which the results can be generalized. Even so, we explicitly do not exclude employees in management positions, as long as their position is in the field of software engineering. This way, we expect our results to yield a more holistic view of the researched topic and its population.

1.3.7 Summary

In summary, we define six requirements that further define the scope of our research. In the following chapters, we will use these to evaluate the study design and the results.

Req. 1 The study must be structurally applicable to small and medium sized companies
Req. 2 The study must find results specific to the area of software engineering
Req. 3 The study must produce results in an exploratory way
Req. 4 The study mut produce results via qualitative methods
Req. 5 The study must show connections between created/generated ideas and committed ideas
Req. 6 The focus must be on regular employees rather than management only

1.4 Structure

The following chapters of this thesis are structured as follows:

Chapter 2 describes concepts and topics that lay the foundation of this work.

Chapter 3 discovers work that covers similar objectives to this thesis. The related work should focus on idea generation or idea commitment and fullfill some or most of the research objectives and requirements from above. Each section of the chapter covers one specific piece of related work. Each section will give a short overview over the contents of said paper. Afterwards we will evaluate the paper based on our requirements and show that no related work exists that fullfills every requirement.

Chapter 5 lays out the concrete methods and design of the study. It explains, how the case for the study was selected as well as the used instruments. Then, it describes the interview structure and the idea collection phase that serve as the main data sources of the study.

Chapter 6 describes the execution of the case study as well as its results. The chapter covers participant selection and demographics as well as coding of results and the final codes.

Chapter 7 discusses the results. First, we evaluate them against the research objectives and requirements. Afterwards, we discusses the limitations of the results and describe measures taken to ensure validity. Finally, we list some practical and theoretical implications of the results.

Chapter 8 summarizes the content and proposes future work that can be conducted on the results of this thesis.

2 Background

This chapter introduces the general terminology and concepts that are required as a foundation for the rest of this thesis. Section 2.1 introduces a definition for creativity that will be used throughout the following chapters.

2.1 Creativity

There is no single agreed upon concept of creativity and what it is. However, much of modern research on the topic was inspired by Guilford [Gui50]. He described creativity as 'divergent thinking'. Creativity is also related to 'the linking of ideas' or to novelty in general [Cro11a].

In this thesis, we define creativity as the ability to come up with new ideas. The more creative a person is, the more ideas they can come up with. These ideas can be created to solve problems, to change the status quo or simply be a mental exercise of what could be.

It is important to note that creativity is usually associated with an improvement. However, this is not necessarily the case. Creativity is also ble to be disruptive or introduce changes for the worse [Cro11b].

Creativity in general is associated with artistic fields such as music, painting or poetry. And until the mid of the 20th century, this was also a prevelant opinion in scientific research. However, more recent research has shown, that creativity can appear in every field of our modern lives [Bec11].

3 Related Work

This chapter lists some related work and gives a short description and analysis for each paper.

There is very little work on creativity and new ideas in the context of software engineering. Therefore, we extended the selection criteria for related work to other fields and similar topics. Papers were collected from Google Scholar [Goo], the Science Direct catalogue [BV] and by forward and backward snowballing.

The collected papers where then filtered according to how well they fitted the topic. We did so by evaluating the papers against the research goals and requirements. we then selected the papers with the highest overlap and presented them in this chapter.

The following sections each summarize one paper from the related work and then evaluate it against our research goals and requirements.

3.1 Monteiro et al.

Monteiro et al. [MSC16] studied innovative behaviour. They were looking for supporting factors of innovative behaviour. They conducted a pilot case study with software engineer professionals in a Canadian software development company. The considered factors were the individual's group, their leadership, the structure, norm and values of the company and the specific details of the innovation itself.

Participants were selected according to the following parameters. The researchers were looking for individuals with varying levels of innovative behaviour. They achieved this rating by asking the project managers of each project about their subordinate's innovative behaviour and then compiling a rating from the results.

The data was collected via two methods. The first one conducted semi-structured interviews with 77 open-ended questions towards each participant as well as 34 questions that were answered by the participant's team leader. The second method was field observations gathered during team meetings.

Monteiro et al. [MSC16] found that there are several factors that lead to innovative behaviour. Personality moderates how many external factors can influence behaviour. From a project perspective, technological challenges and requirement stability are the main factors that enable or hinder innovative behaviour. There also seems to be a connection between leadership style and innovative behaviour. The final factor identified in the paper was a customer's demand for more or less innovation [MSC16].

The paper by Monteiro et al. identifies factors that influence innovative behaviour. Innovative behaviour requires idea generation as well as idea commitment. Therefore the paper also identifies factors that lead to idea commitment. The paper does, however, not identify or list any concrete ideas that were generated by participants. So, the first research goal is not reached by this paper.

Monteiro et al. conducted their research with software developers of a Canadian software company. So, their results are specific to the field of software engineering. The methods used were semi-structured interviews as well as field observations. Both can be structurally applied to small and medium-sized companies. Results were produced via qualitative coding. Monteiro et al. focused on regular employees and used team leaders mainly as an additional source of information about the participant's innovative behaviour. The study did, however, not look at the relationship between generated ideas and ideas that were committed to.

3.2 Ratnaningsih et al.

Ratnaningsih et al. [RPP16] conducted a study among employees of a clothing-manufacturing company. They measured Innovative behaviour and psychological capital of employees and found a significant positive correlation between an individual's psychological capital and their workplace innovative behaviour.

Ratnaningsih et al. don't look at specific ideas that participants have. They do, however, look at factors that influence creativity and factors that influence idea commitment.

Their work focuses mainly on workplace innovative behaviour in general and on the driving factor of individual psychological capital. But they do not address the kinds of ideas that employees come up with. They also don't look at idea commitment or factors that influence idea commitment. Specifically, The work of Ratnaningsih et al. doesn't focus on individual factors that contribute to idea generation and commitment. It instead looks at the correlation between psychological capital and workplace innovative behaviour among all study participants. Additionally, their study does not contribute a method for identifying connections between generated ideas and ideas that are committed to.

3.3 Rietzschel et al.

Rietzschel et al. [RNS10] conducted two studies on idea selection. They investigated how well test subjects performed at selecting optimal ideas from their generated ideas and found that humans generally do not perform very well at idea selection. Several countermeasures did not improve this significantly.

Their research does not rely on specific company sizes and is therefore applicable to small and medium-sized companies. Additionally, they investigate a connection between generated and shared ideas.

But the results are not specific to the area of Software Engineering. Participants were all undergraduate psychology students. The studies were also not exploratory in nature. Instead, they were explanatory and aimed at explaining the phenomenon of poor idea selection.

3.4 Björk and Magnusson

Björk and Magnusson [BM09] explored the "interrelationship between innovation idea quality and idea providers' network connectivity" [BM09]. They accessed an existing "IT-based system for capturing and storing innovation ideas" [BM09]. They also conducted interviews within the company in which they asked selected individuals who are highly involved in the innovation. The interviews were conducted to further the researcher's understanding of the process of how ideas were handled within the company. Björk and Magnusson found a strong interrelationship between innovative ideas and an individual's or group's social network. Although for individuals, this relationship was positive, and for groups, it was negative.

In this work, the authors look at the problem of idea generation and innovation in an exploratory way. They investigate a connection between social networks and the quality of innovative ideas.

However, the paper does not contain any information about the size of the field of the investigated company. Therefore the results are very likely not specific to the area of Software Engineering. Additionally, small and medium-sized companies don't usually have IT-based systems for supporting innovation. This means that the method is not structurally applicable to small and medium-sized companies. The innovative ideas were also investigated after they were already shared. So no deductions about idea generation were possible. The method is also quantitative in nature.

3.5 Müller et al.

Mueller et al. [MMG11] focused on the existence of a bias against creativity. They conducted an experiment and found that evaluators are more likely to view creative ideas in a negative light when they want to reduce uncertain outcomes. Creative ideas are novel in nature, and most people seem to unconsciously connect novelty and low likelihood of success. Most people also want to increase the likelihood of an idea succeeding and therefore reject creative ideas.

Mueller et al. created their findings by conducting an experiment and did not disclose how they selected the participants. Therefore it is uncertain whether their method can be applied to small or medium-sized companies. Their findings are not specific to the field of Software Engineering. Their experiment is explanatory in nature and does not produce results in an exploratory way. The results were also not qualitative. Experiments produce quantitative data. Their method did, however, show a connection between generated ideas and committed ideas. It showed that creative ideas are less likely to be committed to as they are perceived as not practical and unlikely to succeed.

3.6 Scott and Bruce

Scott and Bruce [SB94] designed a model in which several factors influenced innovative behaviour. The study was conducted within the R&D department of a large technology company situated in the US.

First, the researchers interviewed the company's management to get a basic understanding of the company's bias towards innovation. They also conducted semi-structured interviews with 22 employees of the R&D department to confirm this bias. Afterwards, surveys were sent out to all other employees of the department. Managers were asked to participate in an additional survey to rate the employees' innovative potential.

They identified the main factors "leadership, workgroup relations and individual attributes" [SB94]. The results supported several preexisting theories. For example that employees apply their relationship with their supervisor to the company as a whole, and that the Pygmalion effect [RJ68] is measurable in innovative behaviour.

Scott and Bruce investigate factors that influence innovative behaviour. They don't look at the concrete ideas that the participants have. They do, however, look at factors that lead to sharing these ideas, as this is a part of innovative behaviour.

Scott and Bruce conducted their research at a large technology company. But their methods can also be applied to medium and small companies. However, they did not focus on the field of software engineering but rather on innovative behaviour in general. The study was also not exploratory, as it aimed at finding a model for innovative behaviour. This falls under explanatory research. To validate the model, they also used majorly quantitative methods on data gathered via surveys. They also didn't investigate a connection between generated ideas and committed ideas. The study does focus on regular employees rather than management only.

3.7 Srinivasan et al.

Srinivasan et al. [SMR12] conducted a laboratory study on the idea generation capabilities of individuals in teams. They asked 192 business students to participate in a brainstorming session and generate ideas. The experiment compared the performance of two groups of participants. One was seated in a single conference room for the session, while the other group held the brainstorming via digital communication. They found that dispersed groups showed better performance compared to groups with all members in the same room.

The study by Srinivasan et al. doesn't look at the concrete ideas that participants come up with. It also doesn't consider idea commitment.

The study is applicable to small and medium-sized companies, and it focuses on regular employees rather than management only. However, the experiment is neither exploratory nor does it employ qualitative methods. It does also not produce results specific to software engineering.

3.8 Summary

In this chapter, we described seven papers from the disciplines of software engineering, psychology and business. There is very little research on idea generation and creativity in relation to software engineering. Amin et al. [ABHR17] also note this problem. Therefore, we also considered a wider range of papers as related work. We added papers that focus on idea generation and creativity

	Monteiro et al	Ratnaningsih et al.	Ritzschel et al.	Björk et al.	Mueller et al.	Scott et al.	Srinivasan et al.
Req.1 Structurally applicable for small and medium-sized companies	✓		✓		?	✓	✓
Req.2 Specific to the field of Software Engineering	✓						
Req.3 Exploratory results	✓			✓			
Req.4 Qualitative	✓						
Req.5 Connections between generated and committed ideas			✓		✓		
Req.6 Focus on regular employees	✓					✓	✓

Table 3.1: Requirements fullfilled by related work

in fields other than software engineering. We added papers that focus on topics similar to idea generation and creativity as well. In particular, we added papers that focus on innovative behaviour in software engineers.

Table 3.1 lists the related work mentioned in this chapter. The table marks the fullfilled requirements and research goals for each entry. It also shows, that none of the related work fullfills all requirements or research goals.

We therefore conclude that this thesis provides a relevant and new addition to existing work by laying the foundation for a deeper understanding of new ideas and creativity in Software Engineering.

4 Methods

In Chapter 1, we formulated two research goals for this work. According to these research goals, we want to design a study that yields the answers to the following questions:

We want to design and execute a study that can be applied to answer the following questions:
RO1 What kinds of ideas do software engineers have, and what factors influence their creativity?
RO2 What factors influence which ideas are committed to being at least shared or implemented?

This chapter describes the initial planning phase toward solving the problems posed by the research goals. The first section describes why a case study was selected as the research method. We also describe the role of related work as the basis of the case study interviews. In the second section, we describe an expert survey. Experts were asked how to collect ideas from employees in software engineering. Their suggestions were later implemented in the case study design.

4.1 Research Method

There are several requirements posed towards the study that this thesis aims to create. Two of those requirements are that the study has to be exploratory in nature and that the results should be produced in a qualitative way. One scientific method to reach this goal is to conduct a case study. Case studies are highly connected to qualitative research, and those terms are often used interchangeably [Eis89]. Case studies can involve multiple methods for data collection as well as one or multiple cases [Eis89].

Eisenhardt [Eis89] describe a structured process of conducting case studies and building theories from them. In the following chapters, we will use the paper by Eisenhardt as a guideline to construct our case study. The following steps are part of the described process of constructing a case study.

First, one has to define a research goal or question. The research goals for this thesis are described in Chapter 1. After defining the research goal, Eisenhardt list the selection of cases and the crafting of instruments as the next steps.

4.1.1 Case Selection

In a case study, the case represents the unit of analysis. It defines the sample size as well as the focus of the research. Case selection is one of the most important steps in conducting a case study.

The requirements in Chapter 1 already define an upper bound for the selected cases. The cases have to focus on small and medium-sized companies as well as the field of software engineering. It also has to focus on regular employees rather than only on the management. Case studies can be conducted with a single case or multiple cases. Due to time and resource constraints, we decided on using a single case. The selected case is *Software engineering professionals working at iteratec GmbH*.

The iterates GmbH is a medium-sized German software development company with offices in Munich, Stuttgart, Hamburg, Frankfurt, Vienna, Wroclaw and Dusseldorf. It currently has around 400 employees. They work in several positions such as software developer, software architect or dev-ops engineer. iteratec GmbH permitted the author of this thesis to use the company's resources to conduct their research. Employees volunteered to act as participants in interviews and idea collection.

4.1.2 Used Instruments

We selected interviews as the primary data collection method. Interviews are often used as a data collection method in case studies [CBF19] and offer a direct way of generating data from participants.

Interviews can be conducted in a structured, semi-structured or unstructured way. Structured interviews increase the comparability of interview results and are well suited for quantitative research methods such as experiments. Semi-structured interviews allow participants to introduce their own points while still maintaining a degree of structure that supports the comparability of results. We, therefore, decided to use semi-structured interviews for our case study.

During the review of related work, one paper was selected as the foundation of the interviews. The paper by Monteiro et al. [MSC16] fullfills most of the requirements for this thesis. In detail, it's method is structurally applicable to small and medium-sized companies, it is specific to the field of software engineering, it is exploratory in nature, it produces results in a qualitative way, and it focuses on regular employees rather than only management. This can be seen in Table 3.1. We contacted Monteiro et al. and got permission to use their question catalogue as the basis for our own interviews. The questions were then further filtered and expanded upon to create the question catalogue for the interviews. Chapter 5 describes the exact process.

4.2 Expert Survey

The literature research yielded no results on what ideas are thought out by software engineering professionals. However, a lot of papers mention that the field of innovation and creativity is only sparsely covered in the field of software engineering.

We conducted an expert survey among professional researchers, software engineers and experienced students at the University of Stuttgart. The goal of this survey was to determine methods for collecting ideas from software engineering professionals over a fixed time span.

Question
What methods can be employed for collecting ideas from employees in the field of software engineering?
What measures can be employed to reduce the risk of 'losing' ideas before they are written down?
What time frame should be set to maximize the relevance of results?
Do you have any further remarks?

Table 4.1: Expert Survey Questions

The questionnaire included three questions. They are posted in Table 4.1. Experts suggested letting the participants write down the ideas for themselves. For each idea, location and time should be noted. Location and time data help participants remember the exact context in which the idea appeared. Participants can write ideas onto paper or into a messenger app on their phones. Messenger Apps provide the additional benefit that they log the correct time automatically. One expert suggested that a voice recorder may help participants who have trouble writing their ideas down into text.

Ideas should then be transmitted to the researcher in the form of an interview. This way, coding can be employed to make the results comparable. Coding is a method for finding connections among interview statements. it can be employed as an analytical process and is well documented in prior work (e.g. [CBF19], [Str90]).

Most experts suggested a time frame of either one hour with fully supervised idea-collection or one week with individualized idea collection and idea transmission afterwards. The one hour frame provides a more complete sample of ideas at the cost of fixing environmental factors. The one week time frame provides fewer individual ideas per time step, but ideas can be analyzed based on environmental factors.

5 Study Design

This chapter describes how the data collection of the case study was designed. First, we describe what steps are part of the data collection and what their purpose is. The data collection includes three steps; an initial interview, an idea-collection phase and a second interview. Then we describe in detail how every single one of those steps was constructed. For the interviews, we also describe the construction of their respective question catalogues. Finally, this chapter also describes how we employed coding to gather useful information from the collected interview transcripts.

5.1 Data Collection

We decided on splitting the data collection into two steps. In the first step, participants took part in an open, semi-structured interview. In the second step, participants were asked to collect all ideas that they had in a given time interval. Following the interval, participants took part in a second interview. The second interview served the purpose of collecting the data from the idea-collection phase.

During the initial interview, some demographic data about the participants was collected. This data includes gender, age, work experience, job description, degree of education, as well as how long the participant has worked for their current employer.

The initial interview was also used to identify each participant's bias towards idea generation and commitment, as such biases can influence what ideas are generated by said person. The initial interview is further described in Section 5.2.

The idea-collection phase started right after the initial interview and lasted for one week. Participants were instructed to write down as many ideas as possible during that time span. They were also given some guidelines on how to collect the ideas. This served to make the results more comparable as well as improve the overall quantity and quality of collected ideas. The initial interview is further described in Section 5.3.

The second interview took place directly after the idea-collection phase. We asked participants about their experience with the idea-collection phase and whether they had additional remarks. We also assured that the participants' bias towards idea generation had not changed. The initial interview is further described in Section 5.4.

5.2 Initial Interview

The first step toward designing the case study was to generate a catalogue of open questions that could be used in the initial interviews with the participants. Interview questions were based on the questions in the study by Monteiro et al. [MSC16].

Monteiro et al. [MSC16] used 77 open-ended questions in a medium-sized software development company. The questions were asked in a semi-structured interview with the developers of said company. The author of this paper was given permission to use their questions as the basis for the interview questions used in this paper.

The questions by Monteiro et al. were directed at finding factors that influence innovative behaviour. They did, however, not cover the concrete ideas that software developers have. Additional questions were designed to cover this area. Additional questions were also designed to cover ideas and creativity outside of the participants' work environment.

Monteiro, da Silva, and Capretz also included many questions that fit their research objective but are not useful in finding out what ideas professionals in the field of software development have and what factors lead to them committing to ideas. Monteiro, da Silva, and Capretz directed some questions in a similar direction as other questions. We removed these semi-duplicate questions from our catalogue.

5.2.1 Interview Questions

The question catalogue for the initial interview consists of 19 questions across four categories. Some questions include probe questions. We can use these to further detail participants' answers. All questions are listed in Table 5.1. The table also shows which questions were copied from or inspired by the questions from Monteiro et al. [MSC16]. The four categories are chosen as follows.

The *Demographic Questions* category includes general demographic questions. They are used to make participants comparable and to reduce bias introduced by factors like age and gender.

The *Personal Bias* category includes questions that create a common understanding of the terms 'idea' and 'creativity'. The questions in this category also check how the participants view these topics and whether there is a specific bias towards them.

The *Company* questions regard the iterate GmbH. At the time of the interview, all participants were employed at this company. The questions in this category are used to find environmental factors introduced by the company. According to Monteiro et al. [MSC16], these factors correlate with employees committing to ideas in a workplace environment.

The *Participant's Creativity* category includes questions that test what other environmental factors influence the participants' creativity. The supported factors are time, location, other people, social environment as well as performed activities. We also asked participants how the ideas differed, that they came up with during work versus during their free time.

The catalogue also includes probes for some questions. These can be used in case the participant has difficulty answering a question. They can also help when the answer is very concise and does not include a lot of details. Prompts were used only in some interviews and at the interviewer's discretion.

In grounded theory, the instruments evolve along with the researchers' understanding [Cha06]. In the case of this study, we added some questions during later iterations of the interview process. We added them to enrich the collected data in areas where it was previously lacking. Table 5.1 makrs those questions with 'iteration x'.

5.3 Idea Collection Phase

During the idea-collection phase, participants noted down all ideas they had over a fixed span of time.

The ideas were not filtered by workplace relevance, usefulness or other factors. Participants were free to omit ideas that they felt uncomfortable sharing or did not want to share for other reasons. The time and context of an idea can help find connections to other generated ideas. Therefore, participants were also asked to note down the time and context of an idea.

Preferences toward note-taking are highly individualistic, and we suspected that a fixed idea-collection medium might have a negative impact on the number of collected ideas. Therefore, we did not fix the idea-collection medium. Participants were free to choose a medium of their choice for gathering the ideas. They were also not restricted to a single medium. The participants were given some suggestions on what mediums they could use. These suggestions were taken from the expert survey described in Section 4.2. They included a regular notebook, post-its, a private chat in a messenger app and a voice recorder.

We selected a time span according to the suggestions gathered during the expert survey described in Section 4.2. Most experts suggested either a time span of either one week or one hour. A time frame of one week is more suitable for finding factors that influence idea generation. Therefore we selected this time frame.

Data from the first participant showed that the number of collected ideas decreased significantly after the first day. The interviewer instructed future participants to add a daily reminder of their choice to circumvent this problem. This reminder was suggested to all participants except for participant number 1.

5.4 Second Interview

The data from the idea-collection phase existed in many forms, like notes on paper, messages in messenger apps or audio files. We wanted to transfer this data into a unified format to simplify data processing and analysis. We decided to collect the ideas of the idea-collection phase in the form of a second interview. A second interview has the following significant advantages over other data collection formats. The statements can be processed in the same way as the data from the initial interview, and participants can further elaborate on their ideas and the thought process behind them. A second interview also allowed us to put additional questions in place to detect changes in the participants' bias since the first interview. The second interview is also semi-structured with open questions. This allows participants to include points that they find important and that are not covered by the question catalogue.

Category	Question	Source
Demographic Questions		
	What is your gender?	Monteiro
	How old are you?	Monteiro
	How many years of work experience do you have in the IT sector?	
	What is your current job description?	Monteiro
	What is the highest degree of education you have achieved?	
	How many years have you been working for iteratec?	Monteiro
Questions regarding personal bias		
	How do you define an idea?	
	Probe: What about X? Is that also an idea?	
	How do you define creativity?	
	Do you think creativity is useful in your work place environment?	
	Probe: Does this also hold for other jobs/companies?	
	Do you think creativity is useful in your private environment?	
	Does Software Engineering have a greater tendency towards creativity compared to other fields?	
	Dou think there are different kinds of creativity?	Iteration 3
Questions about the company		
	Why did you chose to work for iteratec?	Monteiro
	How do you feel about working at iteratec?	Monteiro
	Probe: How does this differ from other companies you worked at?	
	How does iteratec handle creativity and new ideas?	Monteiro
	Probe: What factors support/hinder new ideas and creativity?	
Questions about the participant's creativity		
	How creative are you	Iteration 2
	Is there a specific time or place when you usually come up with new ideas?	
	Probe: Why?	
	Do other people influence your creativity?	
	Probe: How?	
	Do you usually come up with new ideas when you are alone or with people?	
	Probe: How do the ideas differ?	
	Are you more creative when you are active or relaxing?	
	Probe: Is there a difference depending on the kind of activity?	
	What ideas do you usually come up with during work vs during your free time?	

Table 5.1: Interview Questions - Initial Interview

5.4.1 Interview Questions

The question catalogue for the second interview consists of nine questions over three categories. See Table 5.2. Some questions include probing questions, just like in the initial interview. Five questions are repeated questions from the first interview. Their purpose is to detect changes in the participants' bias towards new ideas and creativity. The second interview also includes a question that was added during a later iteration.

The *Confirmation of bias* category contains one question. It determines whether the participants' definitions of ideas or creativity have changed since the initial interview.

The *Questions on gathered ideas* category contains four questions about the ideas that the participants gathered over the course of the idea-collection phase. Some of the questions are asked for each individual idea, while others can be applied to multiple ideas at once.

The *Questions on change in personal creativity* category also contains questions from the initial interview. The questions in this category are identical to the questions in the *Questions about the participant's creativity* in the initial interview (see Table 5.1). However, the probing questions differ to reflect the changed goal of the questions.

5.5 Coding

Coding is an analytical method for extracting qualitative data from texts. There are many different ways of coding with specific use cases. We employed coding to extract themes and topics from the interview transcripts of each participant. We decided on using a three-step coding approach. First, we performed *open coding* on each paragraph of the interview transcript. Second, we used *axial coding* to find common themes in the participants' statements. We finally applied *selective coding* to categorize the data into three main groups.

5.5.1 Open Coding

Open coding is the first step in the coding process. Charmaz [Cha06] also describes it as 'Initial Coding'. During open coding, the researcher splits the data into discrete parts. They then summarize these parts with the use of codes.

We decide on using In Vivo Coding for the open coding. In Vivo Coding uses the participants' own language to create the codes. Saldana [Sal15] describes it as easy to learn and applicable for all qualitative studies. It also helps in preserving the participants' statements and avoiding misinterpretations.

The coding was done per paragraph, where each paragraph is one logical statement by the participants. The separation into logical statements kept the statements as small as possible while not missing context. In comparison, line by line coding has the problem that important context might be missing from a coding that will only be given in the succeeding line.

Category	Question	Source
Confirmation of bias		
	Has your defintion of ideas or creativity changed since the last interview? *Probe: How?*	
Questions on gathered ideas		
	Tell me about your ideas. *Probe: When/Where did you have this idea?* Have you taken any steps towards implementing this idea? *Probe: Why? / Why not?* Have you noticed any kind of pattern in the ideas you had? *Probe: Why do you think this pattern exists?* Do you have any more ideas, you want to share?	
Questions on change in personal creativity		
	Is there a specific time or place when you usually come up with new ideas? *Probe: Why has that changed from last time?* Do other people influence your creativity? *Probe: Why has that changed from last time?* Do you usually come up with new ideas when you are alone or with people? *Probe: Why has that changed from last time?* Are you more creative when you are active or relaxing? *Probe: Why has that changed from last time?* How creative are you?	Iteration 2

Table 5.2: Interview Questions - Second Interview

5.5.2 Axial Coding

Saldana [Sal15] describes axial coding with the goal of "reassembl[ing] data that were 'split' or 'fractured' during [open coding]"[Sal15]. In summary, axial coding tries to identify the most important codes and find connections between them. We employed axial coding as the second step of our coding process.

5.5.3 Selective Coding

As a final coding step, we employed selective coding as described by Charmaz [Cha06] and Saldana [Sal15]. Selective Coding or Focused Coding is used to build main categories from those codes that 'make the most analytic sense to categorize [the] data' [Cha06].

6 Results

This chapter presents the results of the conducted case study. Section 6.1 gives some demographic data about the participants. This data is then used to explain possible bias in the observed results. Section 6.2 describes in detail how the study was conducted and what questions were asked. Section 6.3 explains how results were retrieved from the interviews via coding. Section 6.4 iterates over the obtained axial codes in detail and explains them with concrete statements from the interviews. Section 6.5 then explains the selective codes found in the data. Section 6.6 then shows interesting patterns and correlations in the codings.

6.1 Participants

6.1.1 Participant Selection

The study was conducted in cooperation with the iteratec GmbH. iteratec is a medium-sized German Software Engineering company founded in 1996. It has locations in Munich, Stuttgart, Hamburg, Frankfurt, Vienna, Wroclaw and Dusseldorf. Participants for this study were selected amongst the employees of this company. A request was placed in the company's communication tool. The request was directed at interns as well as student employees and regular employees.

Seven employees took part in the study. All participants volunteered to be part of the study and were informed beforehand about the study's procedures, but not the goal.

6.1.2 Demographic Data Collection

Demographic data about the participants was collected to gain an understanding ofof the covered population and adjust for the overfitting of data. For example, as most participants were male, the collected data is likely biased toward male views on ideas, idea generation and idea commitment. The concrete data collected was the participants' gender, age and total years of work experience in the IT sector. We also asked participants to name their current position and job description in the company. The demographic data was collected as part of the interview without predefined answers.

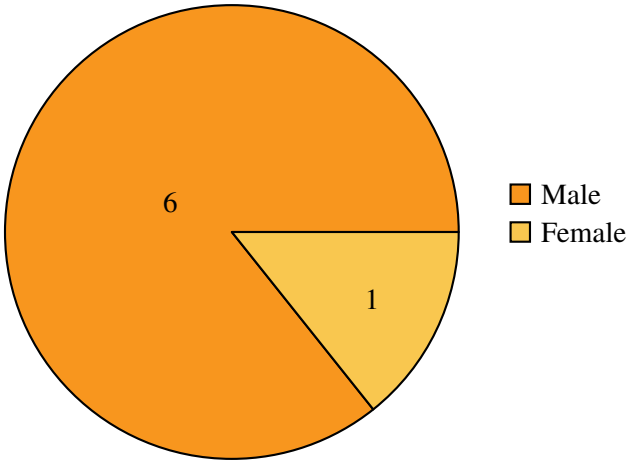

Figure 6.1: Participant Gender

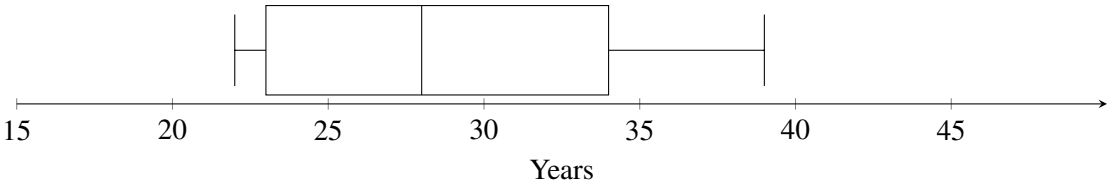

Figure 6.2: Participant Age

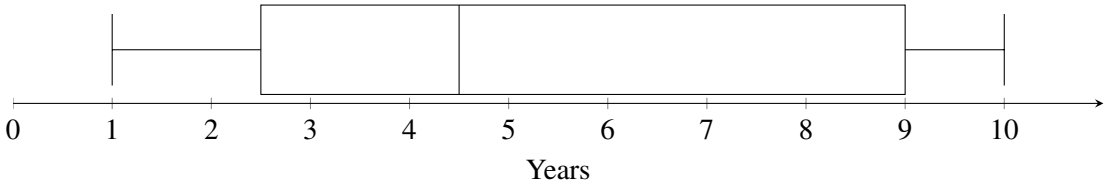

Figure 6.3: Participant work experience in years

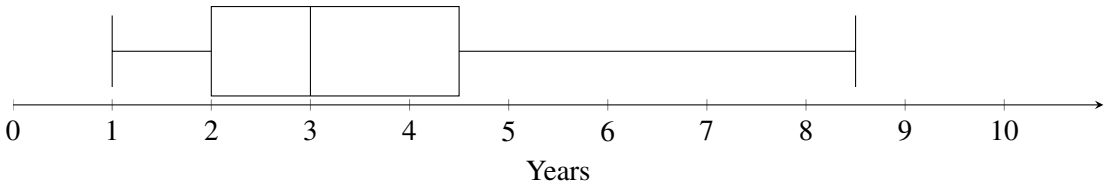

Figure 6.4: Participant years at iteratec

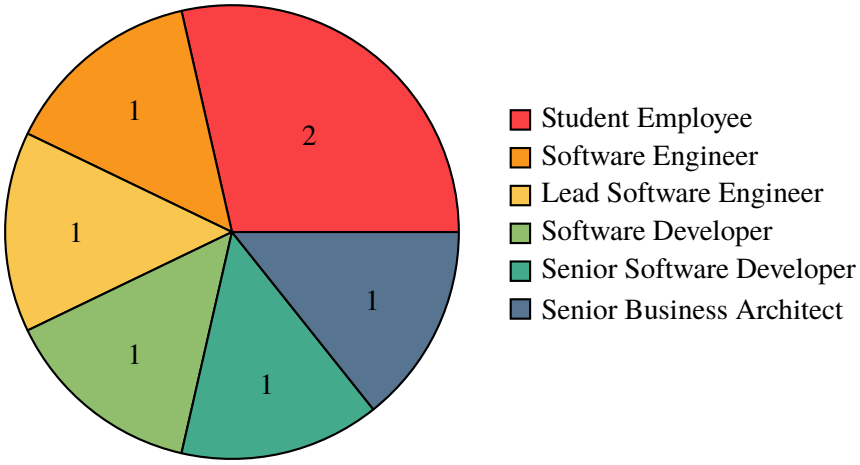

Figure 6.5: Participant job title

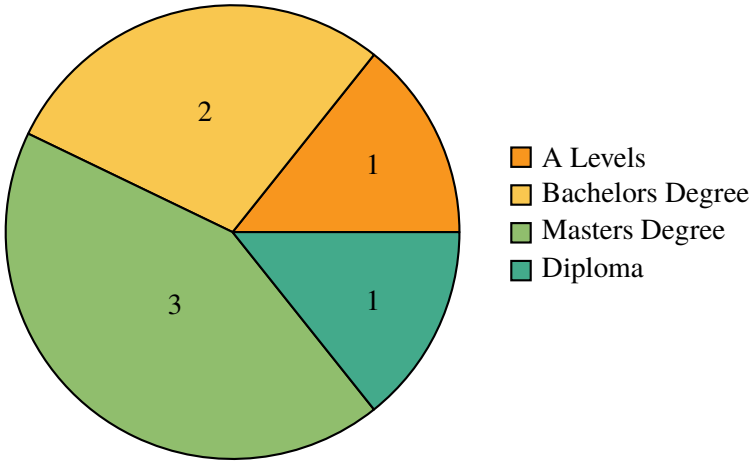

Figure 6.6: Participant highest degree of education reached

6.1.3 Gender and Age

Figure 6.1 shows the gender distribution of the participants. Six participants stated they were male, while one stated she was female. The participants' age ranged from 22 to 39 years old, with a median age of 28 years old. half of the participants fell into the age range of 23 to 34 years old. Figure 6.2 shows the age distribution in boxplot form.

This data indicates a bias towards young males in the results. This bias can be partially explained by looking at the researched population. According to a survey conducted amongst software developers from all over the world [Sta21], 92% of software developers identify as a man, while only 5% of software developers identify as a woman. At iteratec, women make up 17% of employees in software development. Therefore, we can conclude that there is no underrepresentation of women in our participants compared to the researched population.

6.1.4 Work experience and years at iteratec

The boxplot in Figure 6.3 shows the total work experience participants had in the field of software development. Participants had between 1 and 10 years of work experience. The median work experience was 4.5 years and half of the participants had between 2.5 and 9 years of work experience.

According to a survey conducted amongst software developers from all over the world [Sta21], around 60% of software developers have between 1 and 10 years of professional work experience.

6.1.5 Current job title

Participants gave a wide variety of job titles. Figure 6.5 shows a pie chart of the given answers. The job titles included one Software Engineer, one Lead Software Engineer, one Software developer, one Senior Software Developer, one Senior Business Architect, as well as two Student Employees. All participants were directly involved in software development as part of their job.

6.1.6 Highest degree of education

Each participant was asked for the highest degree of education they had reached. Figure 6.6 displays the answers to this question in pie chart form. The answers clearly indicate a bias towards higher education – every participant completed at least their A levels. Most participants even reached a master's degree or diploma. All participants except for one got a university degree. However, StackOverflow [Sta21] confirms this bias in the researched population. In their survey, 42% of participants had a bachelor's degree and 21% had a master's degree.

6.2 Study Execution

6.2.1 Initial Interview

The initial interviews took place in February and March. We invited participants to a remote meeting which we recorded. Due to the pandemic and to allow for a more flexible time schedule, we decided to hold the meetings remotely. It also allowed participants from other locations to take part in the study.

First, interviewees were informed about the general goals of the case study. In detail, they were told that this study seeks to find the kinds of ideas that participants generate inside as well as outside of their work environment and what factors influence idea commitment. Participants were also informed about the procedure of the study. They learned about the structure and purpose of the initial and secondary interview, as well as the idea-collection phase in between.

The purpose of the initial interview was to collect the following data:

- Demographic data about the participants
- Participants' definition of what ideas and creativity are

- Participants' view on the company
- Participants' bias towards idea generation and creativity

A single researcher conducted the interviews in a semi-structured style. Participants were asked a question and then had the option to answer in as much detail as possible. Depending on the answer, probing questions were used to gain further insight into participants' thoughts on a specific topic. The complete list of questions can be seen in Table 5.1.

All interviews were recorded using the recording feature of Microsoft Teams. The recording was later used to transcribe the interviews for further analysis.

Ideas and creativity definition

There are many different understandings of what "ideas" and "creativity" are. We asked participants to define those concepts in their own words. This definition helped form an understanding of how participants viewed those concepts and what they considered them to be. Depending on the answers, we probed further by giving specific examples and asked participants whether these examples fitted their definition of "ideas" or "creativity".

We also asked participants whether they viewed creativity as useful in their professional as well as personal lives. Depending on the answer, we further probed whether this holds for other jobs in the industry or other companies apart from iteratec.

Questions about the workplace environment

Next, we asked participants about their workplace environment. We asked participants how long they had worked for iteratec and how they felt about working for them. After collecting this data, we asked participants how the company handled creativity and new ideas.

Personal bias and prerequisits

We asked questions about the participants' personal biases towards ideas and creativity in the last category. We asked whether there was a specific time or place where participants generated more or fewer ideas than usual. We also asked for other factors which influenced their creativity. The included factors were the presence of other people, whether or not the participant was active or relaxing and whether the participants were more creative during work or free time.

6.2.2 Idea Collection Phase

After the initial interview, participants were asked to collect as many ideas as possible over a time frame of one week. The collected ideas should not be filtered by usefulness or other criteria, but participants were free to omit ideas that they did not feel comfortable sharing. Participants were also instructed to write down the location and time at which the idea occurred.

It was expected that there would be situations in which participants would not be able to write ideas down immediately. Such situations include during exercise or while driving a car. In these cases, participants were instructed to place down a memento to recall the idea later.

In some cases, participants did not feel comfortable sharing an idea. Alternatively, they forgot what it was before writing it down. In these cases, participants were instructed to mark down only the time and location at which the idea occurred. This information was helpful in determining factors that influenced idea generation.

An expert survey that was conducted in advance suggested that there is no one single solution for idea collection that works best for every participant. Therefore, participants were given several suggestions for idea collection methods. These included a simple notebook, a mobile app for taking notes as well as an audio recorder. Participants were also allowed to mix these collection methods as they saw fit.

6.2.3 Second Interview

A second interview was scheduled right at the end of the idea-collection phase. Just like the initial interview, this interview was held and recorded via Microsoft Teams. The goal of this second interview was to discuss the collected ideas that participants marked down over the course of the idea-collection phase. The second goal of this interview was to detect whether the bias towards idea generation had changed since the last interview. This ensured that the bias detected during the initial interview was still valid and that the idea-collection phase did not have an influence on the participants' bias towards ideas and creativity.

First, participants were asked for permission to record the interview. After they gave their consent, the recording was started. The first questions of the second interview focused on the bias towards idea generation and creativity. The interviewer read back the definition of ideas and creativity that the participants had given in the initial interview. He then asked whether this definition had changed over the course of the idea-collection phase. Participants were also asked whether there was a specific time or place where they generated more or fewer ideas than usual. In the case that the answers differed from the answers given during the first interview, the interviewer probed how the participants came up with their previous answers and what made them give a different answer during the second interview.

The second part of this interview consisted of the participants talking about the ideas they collected during the idea-collection phase. The interviewer asked specifically for the time and place where the idea was collected and for the kind of idea. The interviewer also asked whether the participant took any steps towards implementing the idea and why or why not.

6.3 Coding

As described in Section 5.5 in Chapter 5, we employed coding to gather meaningful results from the interview data. The following paragraphs and sections describe how the coding was performed and what results we gathered from the codes.

6.3.1 Open Coding

We employed open as the first step of our coding process.

We decide on using In Vivo Coding for the open coding. In Vivo Coding uses the participants' own language to create the codes. For example, the statement "We produce solutions that perfectly fit the problem, and we need creativity to find these optimal solutions." is represented by the In Vivo code "creativity to find optimal solution".

The coding was done per paragraph, where each paragraph is one logical statement by the participants. The separation into logical statements kept the statements as small as possible while not missing context.

The final open codes can be found next to the interview transcription and translation in the Appendix (see Table A.1, Table A.2, Table A.3, Table A.4, Table A.5, Table A.6, Table A.7, Table B.1, Table B.2, Table B.3, Table B.4, Table B.5, Table B.6 and Table B.7).

6.3.2 Axial Coding

After the open coding concluded, we applied axial coding to determine categories in the codes. Axial coding tries to identify the most important codes and find connections between them, as described in Section 5.5 of Chapter 5.

The axial coding was done in two steps. Figure 6.7 shows the first step. We simplified codes into common tag words and grouped them roughly into abstract categories. From this first step, we created the axial coding axes. Figure 6.8 shows the axes as arrows and rectangles. Arrows mark axes that have values on a scale, and rectangles mark discrete axes.

6.3.3 Selective Coding

As a final coding step, we employed selective coding as described by Charmaz [Cha06] and Saldana [Sal15]. Selective Coding or Focused Coding is used to build main categories from those codes that 'make the most analytic sense to categorize [the] data' [Cha06].

Selective coding yielded three main categories of codes. Namely 'Creativity Factors', 'Idea Types' and 'Idea Commitment'. They are displayed in Figure 6.8 in rounded rectangular boxes.

6.4 Axial Codes

During axial coding, we developed a coding scheme with several axes. This section explains the codes in this scheme and their occurrences in greater detail.

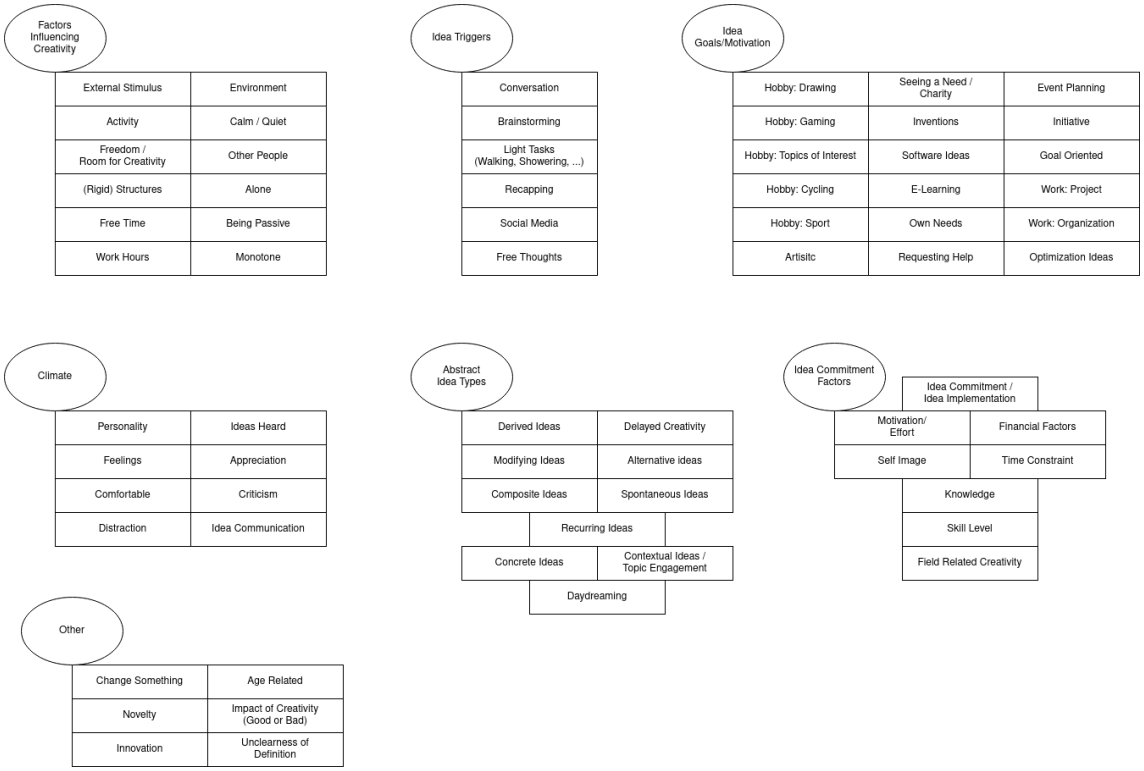

Figure 6.7: Axial Coding Intermediate Codes

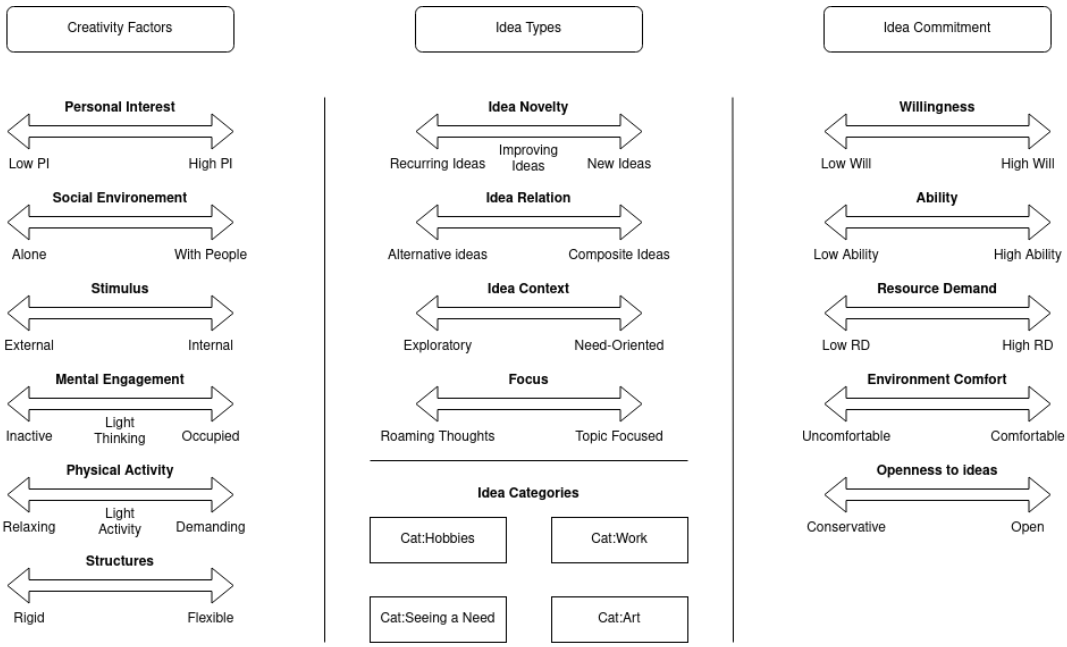

Figure 6.8: Axial and Selective Coding Final Codes

6.4.1 Personal Interest

The ‘Personal Interest’ category with its codings ‘High PI’ and ‘Low PI’ describes whenever a participant mentioned they were personally interested in a specific topic. As an example, one participant came in contact with hospital software as part of a work project. They then developed an interest in that topic. This led them to come up with several ideas on how to improve the software in this area.

6.4.2 Social Environment

The ‘Social Environment’ category with the codes ‘Alone’ and ‘With People’ appears whenever a participant specifically mentions their social surroundings in the context of ideas and creativity.

Some participants mentioned that they were more creative when alone, while others stated that they are more creative while brainstorming with other people. Most participants were able to do both and felt no difference in their creativity when alone or with people.

6.4.3 Stimulus

The ‘Stimulus’ category contains the codes ‘External’ and ‘Internal’. External stimuli can be statements by other people or just random objects that are perceived while going for a walk. Internal stimuli appear when thoughts and memories lead to new ideas or when thinking about an idea produces an improvement of said idea or a new idea altogether. Participants often named external stimuli as the reasons for new ideas. Internal stimuli were not often mentioned explicitly.

6.4.4 Mental Engagement

The ‘Mental Engagement’ category captures how hard a participant was occupied with mental tasks. The codes in this category are ‘Inactive’, ‘Light Thinking’ and ‘Occupied’.

The most prevalent coding of those three was the ‘Inactive’ coding. Participants often said that too little mental work and too few tasks lead to a decrease in creativity. Monotone tasks were often associated with very few new ideas.

On the other hand, participants also mentioned that they were not creative when concentrating or when a task was very mentally taxing. Those occurrences were captured by the ‘Occupied’ coding. On the other hand, participants associated light thinking with an increase in creativity and new ideas.

6.4.5 Physical Activity

The ‘Physical Activity’ category contains the three codes ‘Relaxing’, ‘Light Activity’ and ‘Demanding’.

Light activities like going for a walk, taking a shower or cleaning were often said to have a positive effect on participants’ creativity. Several participants explicitly mentioned that going for a walk allowed them to have multiple new ideas. These ideas were usually not focused on one specific topic. Instead, participants indulged in thoughts and came up with ideas about several different topics.

When participants engaged in demanding physical activity like climbing or other sports, some were not able to come up with new ideas, while others used sport to become more creative. Some Participants mentioned that sport had the same positive impact on their creativity as going for a walk. For example, one participant stated: “I’m not at all creative when I participate in exhausting sporty activities.” Another participant said: “Basically, sport is a mental detox for me. The head can relax during exercising, and that functions as kind of a reset for me.”

The results also differed for relaxing activities. Some participants came up with new ideas while lying on the couch or in bed. Others stated that this had a negative effect on their creativity.

6.4.6 Structures

The ‘Structures’ category revolves around external and mostly corporal structures or freedoms that participants mentioned as having an impact on their creativity. This category includes the codes ‘Rigid’ and ‘Flexible’.

Rigid structures were often mentioned as a major limiting factor for new ideas in the workplace. For example, one participant said that they felt the requirement to book all timeslots limited their creativity. One exception from this negative association was the “innovation-Friday”. On several days a year, iteratec allows its employees to use a full workday for personal projects and topics of interest. One participant described this as giving “structural support for new ideas”.

On the other hand, flexible structures and freedom, in general, were linked to more ideas and creativity. Participants mentioned that they needed at least a certain degree of freedom to be creative.

6.4.7 Idea Novelty

The ‘Idea Novelty’ category contains the codes ‘Recurring Ideas’, ‘Improving Ideas’ and ‘New Ideas’. Some participants have the exact same ideas multiple times. These recurring ideas usually appear when the exact same problem with the exact same solution presents itself. Most ideas that participants mentioned were either completely new ideas or ideas that improve an existing idea or concept.

6.4.8 Idea Relation

The ‘Idea Relation’ shows relations between ideas. It contains the codes ‘Alternative ideas’ and ‘Composite ideas’.

Participants often came up with alternative ideas for problems where they had already found a solution. Sometimes multiple alternative ideas appear at the same time. Other times, participants found an alternative idea after rethinking the problem at a later time.

There were also some cases where participants combined multiple previous ideas or memories into a new composite idea. For example, one participant had the idea to improve a concept called ‘Balls of Fame’. These are named ping pong balls which are awarded to iteratec employees and teams for reaching special achievements. Later, they saw milk badges at a farm and combined both of these moments into a concrete idea for ‘Ball of Fame Badges’, which could be added to an employee’s digital profile.

6.4.9 Idea Context

The ‘Idea context’ category describes the reason why an idea was created. Some ideas came from an ‘Exploratory’ context. This includes cases where the participants were just thinking about a specific topic without the intent to solve a specific problem. On the other hand, the ‘Need-Oriented’ coding describes ideas that were created to solve a specific problem or need. Participants came up with more ideas to solve a specific problem compared to exploratory ideas.

6.4.10 Focus

The ‘Focus’ category contains the codes ‘Roaming Thoughts’ and ‘Topic Focused’. The category differentiates ideas based on whether the participants had their ideas while focusing on a specific topic or just indulging in thoughts without a specific topic to focus on. Participants indulged in thoughts when daydreaming, relaxing or in their free time. Participants also had mostly topic-focused ideas during work time. During free time, they had topic-focused ideas, as well as ideas that appeared while indulging in thoughts.

6.4.11 Idea Categories

Ideas were split into four categories: ‘Hobbies’, ‘Work’, ‘Seeing a Need’ and ‘Art’. Participants came up mostly with ideas that related to their work or hobbies. Some participants also had ideas when they noticed a specific problem either in their personal lives or in their surroundings and came up with ideas to solve that problem. For example, one participant came up with an idea to reorganize the cables on their desk, while two others had ideas to write educational games because they saw a lack of good solutions in that area.

6.4.12 Willingness

The ‘Willingness’ category considers motivation as well as the will required to commit to an idea and implement it. Most participants immediately implemented an idea when they were motivated enough, and no other factors hindered the idea implementation. The ‘Willingness’ category contains the codings ‘High Will’ for high willingness and ‘Low Will’ for low willingness.

6.4.13 Ability

Participants often named a lack of skill or lack of knowledge as the main reasons for not committing to ideas. One participant had an idea to improve a closed source application. They were unable to commit to that idea due to them not having access to the source code. Another participant lacked the required skill to create a prototype of an idea they came up with. For a third participant, the lack of drawing skills led to less motivation towards implementing a specific drawing idea. These statements are all grouped under the ‘Ability’ category with the codes ‘Low Ability’ and ‘High Ability’.

6.4.14 Resource Demand

The category ‘Resource Demand’ included all resource requirements that participants named for the implementation of their ideas. This includes the codings ‘Low RD’ for low resource demand and ‘High RD’ for high resource demand.

Several participants stated financial and time constraints as major factors for not committing to ideas. In contrast, ideas with little or no required resources were often implemented immediately.

6.4.15 Environment Comfort

The ‘Environment Comfort’ category codes statements that relate to participants feeling comfortable or uncomfortable in a specific environment. This environment was usually the workplace or the people around them, but it can also include their surroundings in general. Most participants stated that they were more creative and had more ideas when they felt comfortable in their environment. One participant said: “I can let my thoughts go wild when I’m around people with whom I feel comfortable [...].” Another participant stated: “[Being creative] usually works better at places I’m used to rather than places that are foreign to me.”

6.4.16 Openness to ideas

The category ‘Openness to ideas’ revolves around statements that show how well new ideas are accepted in the participants’ environments. It has the codes ‘Conservative’ and ‘Open’. Participants found that allowing constructive criticism and new ideas was important for the sharing and commitment to said ideas.

6.5 Selective Codes

After completing open coding and axial coding, we determined three main categories in the data. This section explains the selective codes in greater detail.

6.5.1 Creativity Factors

The ‘Creativity Factors’ category contains statements that mention factors that influence participants’ ability to be creative and develop new ideas.

Participants named personal Interest in a topic, their social environment, external and internal stimuli, mental engagement, physical activity, and the rigidness of surrounding structures as factors that influenced their ability to be creative.

6.5.2 Idea Types

The ‘Idea Types’ category describes what kinds of ideas participants have. Ideas can be grouped by abstract attributes like idea novelty, relation to other ideas, idea context and focus. They can also be grouped by the concrete field for which the idea was created. We categorized these fields into ‘Hobbies’, ‘Work’, ‘Seeing a Need’ and ‘Art’ as described in the previous section.

6.5.3 Idea commitment

The ‘Idea Commitment’ category contains factors that influence how likely the participants were to commit to an idea and implement it or at least share it with others. The most prevalent factors were willingness, ability and resource demand to implement the idea, as well as how comfortable participants felt in their environment and how open the environment was toward new ideas.

6.6 Patterns

During coding, we identified several codes that often appear in conjunction. In the following paragraphs, we will describe codes that often appeared together and offer some explanation as to why these correlations occur. To filter out most of the patterns that appeared without a common theme, we only listed patterns that appeared in at least three different paragraphs. In cases where a correlation occurred in three or more paragraphs, but without a common underlying theme, we explained why they appeared even without a common denominator.

6.6.1 Physical Activity and Focus

Participants often mentioned that light physical activity enables them to have more roaming thoughts. For example, one participant said: “I further get new ideas, when I go for a walk or go cycling; So, when my mind can think freely”. Similar statements appear in many interviews. This manifests in the axial codes. In practice, the ‘Roaming Thoughts’ code often appears in correlation with the ‘Light Activity’ code.

6.6.2 Idea Categories and Focus

Another correlation appeared between the ‘Idea Categories’ and ‘Focus’ axes. In particular, the idea category ‘Cat:Work’ often appeared in correlation with the ‘Roaming Thoughts’ code. Several participants mentioned that their ideas during work hours were a lot more focused. For example, one participant said: “With very few exceptions, I had only work-related ideas during work hours.” On the other hand, hobby-related ideas could appear either as topic-focused ideas or as roaming thoughts.

6.6.3 Idea Context and Idea Categories

There are several relations between the ‘idea context’ and ‘idea categories’ axes.

For example, the ‘Need-Oriented’ code from ‘idea context’ often appears with the ‘Cat:Seeing a Need’ category. Participants mentioned that they often got ideas to solve a specific problem after they noticed said problem.s

Another example is the ‘Need-Oriented’ context and the category ‘Cat.Work’. Most participants stated that for work tasks, they got almost exclusively ideas that solve a specific problem they encountered. In contrast, ideas in the ‘Cat:Hobbies’ category appeared equally in the ‘Need-Oriented’ context as well as the ‘Exploratory’ context.

6.6.4 Social Environment and Environment Comfort

Some participants mentioned that their ability to be creative around other people heavily relied on feeling comfortable around those people. These participants had many ideas around people they felt comfortable with and almost no ideas when they were around new people or people they did not feel comfortable with. Therefore there is a strong correlation between the ‘With People’ code and ‘Environment Comfort’.

6.6.5 Structures and Openness to Ideas

Participants said that, in general, rigid structures hinder creativity. However, some structures are able to foster creativity and new ideas. The participants explicitly mentioned the innovation-Friday and brainstorming as structures that can support new ideas. The innovation-Friday is a regular event at iteratec and allows employees to choose a topic of interest and work on it for the duration of an

entire day. Meanwhile, low organizational hurdles were often associated with openness towards new ideas. In the coding, the above-mentioned points appear as a correlation between the ‘Open’ code and the ‘Rigid’ and ‘Flexible’ codes.

6.6.6 Stimulus and Physical Engagement

We found a correlation between the ‘Light Activity’ code and the ‘External’ code. Some participants mentioned that they got an idea due to an external stimulus they encountered while going for a walk. For example, one participant said: “When I took a stroll through nature [...], I got the idea to draw [the trees I saw there].”

6.6.7 Willingness, Ability and Resource Demand

Codes from the axes ‘Willingness’, ‘Ability’ and ‘Resource Demand’ often appeared together. Participants often lost interest in implementing an idea due to a lack of ability or because the implementation would require many resources. Therefore, the ‘Low Will’ code often appeared with the ‘Low Ability’ or ‘High RD’ code.

6.6.8 Social Environment and Idea Context

There is a correlation between the ‘Exploratory’ code and the ‘With People’ code. However, the underlying statements differ significantly. One participant mentioned that “Interacting with people is also more fun when you come up with new ways of spending time together...”. Another participant mentioned that they had new ideas while brainstorming with another person and bouncing ideas around. A third participant got the idea to draw a funny situation that occurred with a friend.

There is no obvious pattern that can be extracted from these statements.

7 Discussion

This chapter discusses the results of the case study. First, in Section 7.1, the results are evaluated against the research objective and requirements. Then, in Section 7.2, we list the limitations of this case study and its results. Afterwards, in Section 7.3, we describe validity in the context of qualitative research and the measures taken to ensure the validity of this study. And finally, in Section 7.4, we describe the practical and theoretical implications of the results. We do so by creating hypotheses from correlations that appear in the results.

7.1 Evaluation

7.1.1 Research Objective

At the beginning of this master thesis, we defined the research objective as follows:

We want to design and execute a study that can be applied to answer the following questions:
RO1 What kinds of ideas do software engineers have, and what factors influence their creativity?
RO2 What factors influence which ideas are committed to being at least shared or implemented?

The results of our case study show that they can answer both of these questions.

The statements grouped with the selective codes ‘Creativity Factors’ and ‘Idea Types’ answer the first question. Participants stated they had ideas when focusing on a specific topic. They do this by brainstorming together with others or alone. Those ideas are usually directly related to the problem they want to solve.

On the other hand, participants can also come up with new ideas when daydreaming or indulging in thoughts. Light activities like going for a walk, cleaning or taking a shower can support this kind of creativity.

When participants are placed in front of the same problem, they often have the same ideas to solve it. Ideas can also improve an existing idea or offer an alternative solution.

Most ideas that participants have are either created to solve a work-related problem or are related to a specific hobby. But some ideas appear when participants notice a certain need of themselves or their surroundings.

Whether or not an idea is committed to being influenced by several factors. Participants need to be willing to commit to the idea, and they require the skills and resources to implement the idea. Ideas they could implement immediately are far more likely to be implemented than ideas with some form of requirement. It does not matter whether this requirement is a lack of motivation, skill or resources.

Environmental factors also play a big role in the commitment to ideas. For example, participants are more likely to commit to an idea when they feel comfortable and when their environment is open to new ideas.

7.1.2 Requirements

Additionally to the research goals, we defined a list of requirements that the research must fulfil.

Req. 1 The study must be structurally applicable to small and medium sized companies
Req. 2 The study must find results specific to the area of software engineering
Req. 3 The study must produce results in an exploratory way
Req. 4 The study mut produce results via qualitative methods
Req. 5 The study must show connections between created/generated ideas and committed ideas
Req. 6 The focus must be on regular employees rather than management only

The constructed case study can be applied to small and medium-sized companies. In fact, it was applied in a medium-sized German software development company.

We ensured the second requirement by limiting the population to people employed in the field of software development. By limiting population and sample, we ensured that the results are also specific to the field of software development.

We ensured exploratory and qualitative results via the methods used to generate the results. We conducted semi-structured interviews to gather large amounts of qualitative data. Coding then alowed us to analyze the data in an exploratory and qualitative way.

Participants stated that they were far more likely to commit to certain types of ideas. For example, ideas with high money and time requirements were less likely to be committed to than ideas that could be implemented immediately.

Participants were not limited to management positions. In fact, no participant stated a higher management position in their job description. We can, therefore, safely assume that the view of regular employees was the focus of this study. In our chosen population, employees in management positions make up a far smaller percentage than regular employees. Therefore, we did not implement special measures to keep the focus on regular employees.

7.2 Limitations

There are some limitations to this case study. In the following section, we identify several factors that might limit the adaptability of the results from Chapter 6.

7.2.1 Sample Selection

Choosing a population and selecting a representative sample is essential for qualitative research [Eis89]. A sample that does not represent the population well might lead to false results and prevent the results' generalisation.

As shown in Section 6.1, only one participant was female. Therefore, we can not detect patterns that are related to participant gender. However, a 2021 survey among software developers found that '92% of professional software developers identify as a man' [Sta21]. Meanwhile, women make up 17% of employees in software development at iteratec. So, our sample's low percentage of women represents the population quite accurately. In conclusion, we expect no negative implications on the overall results.

The sample size might impose another problem. The study was conducted with only seven participants. However, even with this limited number of participants, we were able to identify a significant number of factors both towards idea generation and idea commitment. We expect these findings to hold for the chosen population, but quantitative research will be needed to verify them on a larger sample.

7.2.2 Idea Collection

The time frame and environment of the idea-collection phase have a significant impact on the quantity and quality of collected ideas. Several participants mentioned that they could not note down all ideas due to being busy or simply forgetting to do so. This problem could be addressed by changing the time frame and setting of the idea-collection phase.

For example, the researcher could directly observe the participants and instruct them to say out every idea they have. However, this is impractical in a time frame of one week. Instead, the time frame could be reduced to one hour. However, the results show that most ideas appeared in a specific context. Reducing the time frame to one hour would not cover most of these contexts.

Another possibility would be to extend the time frame to a longer duration. This would help in covering a more significant amount of situations where participants are creative. A larger time frame also helps in observing commitment to ideas with more extensive time requirements. However, a larger time frame also increases the number of ideas that are not noted down.

We chose the time frame of one week because most time schedules of employees repeat after one week. We, therefore, decided for this time frame to have a high amount of situations covered while keeping the number of lost or forgotten ideas as minimal as possible.

7.3 Validity

Validity is an essential part of every scientific study. It ensures that the method is able to show the researched effect, is correctly applied and that its results can be generalized.

Ensuring validity is much easier in quantitative research, as variables are clearly defined, and results can be quantified. According to Noble and Smith [NS15], qualitative research relies on "methodological strategies to ensure the 'trustworthiness' of the findings." These methodological strategies do not rely on statistical measures but rather employ best practices in method design and documentation to ensure validity. Merriam and Tisdell [MT15] provide a framework for validity evaluation in qualitative research. In the following, we will use this framework to address the validity concerns of our study.

In quantitative research, there are four types of validity: Internal Validity, External Validity, Construct validity and conclusion validity. However, Merriam and Tisdell [MT15] suggests instead using internal Validity, Transferability and Reliability. In the following, we will discuss those types and what threats appear in the context of this work.

7.3.1 Internal Validity

According to Merriam and Tisdell [MT15], "internal validity deals with the question of how research findings match reality." In summary, it answers the questions of whether study results actually match to effects in reality and whether the study was able to capture those effects in its results. In qualitative research, a standard method to ensure internal validity is triangulation. In the context of validity, triangulation means using multiple different data sources.

In this study, we asked participants directly about their views on creativity and new ideas. As a second data source, we instructed participants to collect ideas they had over a given period of time. We then collected these ideas and used both data sources to derive our results.

7.3.2 Transferability

External validity answers the question of whether the results of a study can be generalized to the studied population. Merriam and Tisdell [MT15] states that "External validity is concerned with the extent to which the findings of one study can be applied to other situations. That is, how generalizable are the results of a research study?" However, in qualitative research, this can not necessarily be shown. Instead, Merriam and Tisdell suggest to use 'transferability' instead. Transferability describes how well readers of a study are able to transfer the results to their own case.

To achieve transferability in qualitative research, Merriam and Tisdell [MT15] suggest leaving it up to the reader to decide whether the results can be applied to their concrete case. In order to make this possible, the context and sample from which the results were derived have to be described as detailed as possible. We ensure this by giving a detailed description of the employed methods in Chapter 5 and the participant sample in Section 6.1.

However, Merriam and Tisdell [MT15] also suggest to use a sample with "maximum variation". This study was conducted with participants from a wide range of job descriptions and work experience. However, the sample size of 7 participants is very small and could impact severely limit the transferability of the results. The sample also only includes one female participant and no participant older than 40. Lastly, all participants worked at the same company and enjoyed their work. This limits the heterogeneity of the sample in comparison to the researched population.

7.3.3 Reliability

Instead of construct validity and conclusion validity, Merriam and Tisdell [MT15] propose to use reliability as the final validity measure.

Reliability in this context is whether the obtained results can be plausibly mapped to the data collected. I.e. the researchers have to ensure that the results make sense given the used data [MT15].

To ensure reliability, Merriam and Tisdell [MT15] suggest the use of audit trails. Audit trails are a detailed description of how the researchers got to their results. They were first introduced by Lincoln and Guba [LG85]. In Chapter 5 and Chapter 6, we give detailed descriptions on how the research was conducted. The Appendix contains all research notes made during the coding process of the study. This info ensures that readers will be able to follow our thought process in conducting the study and obtaining the results.

7.4 Implications

There is a lack of research on the topic of new ideas and creativity in software engineers. New research focuses on innovation [MSC16] or creativity in a general sense [MMG11]. This thesis adds to the current state of research by conducting a case study on new ideas and creativity of software development professionals.

It explores the conditions under which software engineers become creative, as well as the concrete kinds of ideas that stem from this creativity. The thesis also looks at reasons that support or hinder idea commitment.

The interviews offer a repeatable and semi-structured way of gathering this information from different sample sets within the population of software engineers. The coding scheme can be applied to other qualitative data gathered about software engineers.

From the results, we can deduct a number of hypotheses. These are based on the results from Chapter 6 and the research goals. Some of the hypotheses can already be supported by existing research in the field of creativity. Others offer possible starting points for future research.

7.4.1 Impact of light activities on creativity

Hypothesis: Light activities like going for a walk, cleaning or taking a shower impact creativity positively in software engineers

Null Hypothesis: Light activities have no impact on software engineers' creativity.

Several participants stated that they came up with new ideas when performing light activities. Some also explicitly mentioned the positive effects of light activities on creativity.

7.4.2 Focused ideas during brainstorming

Hypothesis: Focusing on a specific topic or problem causes software engineers to have more ideas to solve said problem.

Null Hypothesis: Focusing on a specific topic or problem has no impact on the amount or kinds of ideas software engineers come up with.

Participants mentioned that they often had ideas when thinking about a specific topic. Those ideas also related to that topic. For example, one participant prepared a presentation for a customer and then came up with ideas on what info to include in the presentation.

7.4.3 Working with other creative people

Hypothesis: Talking to and working with other creative people increases the amounts of new ideas software engineers come up with.

Null Hypothesis: Other creative people have no positive impact on the number of new ideas software engineers come up with.

Participants stated that they came up with more ideas when they were surrounded by other creative people. One participant said: "...especially whilst being with other creative people. One person saying something can spark an idea within the other person."

This hypothesis is already very well supported in existing research about group creativity techniques like brainstorming (see [HRDN01] or [AH18]).

7.4.4 Environmental impact on creativity

Hypothesis: Software engineers are more likely to commit to ideas when they are in an environment that is open to new ideas.

Null Hypothesis: The environment has no positive impact on the commitment to ideas for software engineers.

There are some indications towards this hypothesis. Participants stated openness as one of the factors that support sharing and implementing ideas. Some indications towards this hypothesis are the following statements: "iteratec handles new ideas very openly and honestly. So, when I

have an idea, then it will at least catch on in some way, and someone will listen and sort it out." or "[At iteratec,] You have the freedom to try out new ideas, and if that idea bears fruit or gets more realistic, it oftentimes gets taken up and continued."

8 Conclusion

This chapter summarizes the content of the thesis and presents some applications for future work.

8.1 Summary

We conducted an industrial case study with employees in the field of software engineering. The study consisted of two interviews and an idea-collection phase in between them. The participants volunteered from the employees of a medium-sized German software development company.

During the first interview, we asked participants about their bias toward new ideas and creativity and the role of new ideas and creativity in their professional and private lives. We also collected some demographic data about the participants to ensure our sample was representative. We then instructed participants to note down all ideas they had over a period of one week. Participants also noted the time and context in which they had an idea. In the second interview, we collected the ideas and confirmed that no change in bias occurred over that time.

After the interviews, we transcribed, translated and coded the data to find out what kinds of ideas software development professionals have, what factors lead to them being creative and having new ideas and what factors influence idea commitment.

We categorized the data into 16 axes across three main categories during the coding. These codes allowed us to identify several correlations in the data.

- Participants were able to let their thoughts roam during light activities like cleaning, taking a shower or going for a walk.
- Work-related ideas were usually created when the participants focussed on a specific topic.
- On the other hand, participants were either focussing on a specific topic or letting their thoughts roam when they came up with ideas for their hobbies.
- Ideas that solved a specific need or problem were usually created after participants were confronted with a problem. The same is true for almost all work-related ideas. Work-related ideas usually served to solve a specific problem, while hobby related categories could also appear when participants explored a topic in their minds.
- The presence of other people also had an impact on creativity for some participants. The participants were not able to come up with ideas when they did not feel comfortable around those people. On the other hand, those participants were able to come up with lots of ideas when they felt comfortable in the presence of their surrounding people.

- In general, participants felt like rigid structures hindered creativity. However, some structures, like the innovation-Friday and brainstorming, were able to support creativity and new ideas. Meanwhile, low organizational hurdles were often associated with openness towards new ideas.
- Some participants mentioned that they got an idea due to some external stimulus they encountered during light activity like going for a walk.
- It often caused participants to lose their motivation to implement an idea when it required many resources or when the participant lacked the necessary skills or ability to implement it.

We used the coded data to evaluate our study design based on the research goals defined in Chapter 1. We also ensured the validity of the results based on three metrics: Internal Validity, Transferability and Reliability. Afterwards, we used the correlations in the data to generate hypotheses. Future research may verify or reject these hypotheses.

8.2 Future Work

This study opens up a lot of possibilities for further research. As described in Section 7.2 in Chapter 7, a shorter or longer idea collection phase might yield different results. Future research might opt for a short idea collection phase in a controlled environment. The shorter collection-phase could yield a much lower percentage of forgotten or not noted down ideas.

Another study might look at long term idea commitment. The study could conduct several status update interviews where the researchers collect updated information about the commitment to specific ideas over an extended period. This change could show whether and how participants implement ideas with high resource requirements.

Another interesting aspect would be to conduct the study from this thesis with employees of different companies. Especially employees who don't enjoy their jobs or work in a very conservative work environment would add interesting new information to the results of this study.

Section 7.4 in Chapter 7 also names several hypotheses which could be the basis of further research in the field of creativity. The 'impact of light activities on creativity', 'focused ideas during brainstorming', 'Working with other creative people" and the 'environmental impact on creativity' leave room for future research.

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All links were last followed on April 18, 2022.

A Initial Interviews

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
01	1	Für mich ist eine Idee erst mal nur ein Gedanke, der sich auf irgendetwas bezieht.	To me, an idea is just a thought that relates to something.	idea is thought that relates to something	-	-
	2	Wenn dieses irgendetwas ein Problem ist, dann wäre der Gedanke, wie ich dieses Problem löse oder, wie ich damit umgehe.	If this something is a problem, then an idea is how to solve the problem or how to handle it.	ideas can solve problems	Need-Oriented	Idea Types
	3	Manchmal ist es auch nur eine Antwort auf eine Frage oder eine Fragestellung und manchmal ist es auch einfach nur eine gedankliche Reaktion auf irgendetwas, worin die Frage enthalten ist.	Sometimes, a idea is an answer to a question or sometimes it's just a mental reaction to something including a question.	ideas can answer questions; ideas can be mental reactions	Need-Oriented, External/Internal Stimulus	Idea Types, Creativity Factors
	4	Wenn ich zum Beisiel etwas sehe, dann habe ich eine Idee, was ich damit machen kann.	If for example, I see something, then I have an idea about what to do with what I just saw.	idea about somthing perceived	External Stimulus	Creativity Factors
	5	Damit enthält die Idee auch die Frage, ob ich etwas damit machen soll und was ich damit machen kann.	An idea also includes whether I should do something or what I should do.	idea includes whether and what to do	-	-
	6	Im Endeffekt ist es ein zielgerichteter Gedanke.	All in all it's a thought towards a goal.	idea is thought towards goal	Topic Focused	Idea Types
	7	Kreativität ist für mich die Fähigkeit, mehrere Wege zu finden.	Creativity to me is the ability, to find multiple ways.	creativity is ability to find multiple ways	-	-

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	8	Also Kreativität ist, dass du aus einer Situation in eine andere Situation wechselst. Umso kreativer eine Person ist, desto mehr Wege fallen ihr ein, den Zustand zu wechseln.	Creativity is being able to switch from one situation to the next one. The more creative a person is, the more ways they come up with for changing the current state.	creativity is coming up with multiple ways	Alternative Ideas	Idea Types
	9	Kreativität wird ja eher mit weniger logischen Tätigkeiten in Verbindung gebracht.	Creativity is usually associated with less logical tasks.	creativity associated with less logical tasks	-	-
	10	Also zum Beispiel Zeichnen, Kunst erzeugen, Geschichten schreiben.	For example drawing, creating art and writing stories.	creativity associated with drawing, creating art and writing stories	Cat:Art	Idea Types
	11	Dabei ist die Kreativität nicht die Fähigkeit, die Geschichte zu erzeugen, sondern dass dir mehrere Möglichkeit einfallen, um dies zu tun und du kannst dich für eine davon entscheiden. Eine sehr unkreative Person hat wenige bis keine Wege, um dies umzusetzen.	In this example, creativity is not the ability to write a story, but rather coming up with more ways of writing it. You can then decide on any one of them. An uncreative person has less or no ways at all to do this.	creativity is ability to come up with more ways of writing story	Alternative Ideas	Idea Types
	12	Wenn ich jemandem in der Informatik ein Problem vorsetze und dieser Jemand mehrere Wege findet, um das Problem zu lösen, dann ist es für mich Kreativität.	When I place a problem in front of someone in the field of software development and this sombody finds multiple ways of solving the problem, then that's creativity to me.	finding multiple ways to solve IT problems is creativity	Improving Ideas, Alternative Ideas	Idea Types

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	13	Wenn ich aber jemandem ein Graphen-Problem vorsetze und dieser jemand antwortet "Dijkstra", dann ist das für mich nicht Kreativität.	But when I place a graph-problem in front of someone and this person answers with "Dijkstra", then that's not creativity.	naming common solutions is not creative	-	-
	14	Wenn jemand aber antwortet, "Dikstra mit dieser Modifikation, oder mit dieser", dann ist das für mich Kreativität.	But, if the person answers "Dijkstra with either this modification or that modification", then it's creativity again.	modifying common solutions is creative	Improving Ideas	Idea Types
	15	Diese Modifikation muss keine Verbesserung sein, sondern kann auch eine Verschlechterung sein.	This modification doesn't need to be an improvement. It can also have a negative impact.	creativity doesn't need to improve	-	-
	16	Kreativität kann [in einer Arbeitsumgebung] zu Verbesserungen führen, sie kann aber auch zu Verschlechterungen führen.	Creativity can lead to improvements [in a workplace environment]. But it can also have a negative impact.	creativity can be good or bad in work environment	-	-
	17	Mit Zeit und genug Arbeit wird sie immer zu Verbesserungen führen.	With time and enough work put into it, it will always lead to improvements.	creative improvements need time	High RD	Idea Commitment
	18	Aber eine stark kreative Person, in einem stark zeitkritischen Umfeld, verschwendet möglicherweise mehr Zeit, als zur Verfügung steht.	But a creative person in a time-critical environment may waste more time than is available.	creativity may waste time	High RD	Idea Commitment
	19	Bei sehr monotonen Aufgaben wird der kreative Prozess also eher zu Nachteilen führen.	For very monotone tasks, a creative process might yield worse results.	creativity is bad with monotone tasks	Inactive	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	20	Ich denke aber, dass in den meisten Fällen, der kreative Prozess zur Optimierung führt.	However, I think that in most cases the creative process leads to more optimized results.	creativity usually good	-	-
	21	In meinem Persönlichen Arbeitsumfeld ist Kreativität auf jeden Fall nützlich. Die Softwareentwicklung ist ein Arbeitsumfeld, welches vor allem davon lebt, Lösungen zu finden.	Creativity is very useful in my personal workplace environment. Software development is an environment that thrives on finding solutions.	creativity useful in IT for finding solutions	Need-Oriented	Idea Types
	22	Wir produzieren genau auf das Problem zugeschnittene Lösungen und benötigen Kreativität, um die optimalste Lösung zu finden.	We produce solutions that perfectly fit the problem and we need creativity to find these optimal solutions.	creativity needed to find optimal solution	Need-Oriented	Idea Types
	23	Deswegen müssen wir länger über das Problem nachdenken und sind möglicherweise nicht dazu in der Lage, es in 5 Minuten zu lösen, im Endeffekt produzieren wir aber bessere und passendere Produkte.	This also means, that we might need to think longer about the problem and might not be able to present a solution in only 5 minutes.	creative problem solving takes time	High RD	Idea Commitment
	24	In meinem privaten Umfeld ist Kreativität sehr nützlich.	Creativity is very useful in my private environment.	creativity useful in private environment	-	-
	25	Ich zeichne gerne und ohne Kreativität, ergibt Zeichnen keinen Sinn.	I like drawing and drawing without creativity is not particularly useful.	creativity necessary for drawing	High PI, Cat:Art	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	26	Ich spiele auch gerne Minecraft [ein Computerspiel], wo immer nur das selbe zu Bauen, ohne Kreativität, keinen wirklichen Mehrwert bringt.	I like playing Minecraft [a video game]. Always building the same stuff without creativity does not yield any value there.	creativity useful for some video games	High PI, Exploratory	Creativity Factors, Idea Types
	27	Außerdem denke ich, dass in die Interaktion mit Menschen mehr Spaß macht, wenn man neue Wege findet, Zeit miteinander zu verbringen, anstatt immer nur das Gleiche zu tun.	Interacting with people is also more fun, when you come up with new ways of spending time together, instead of always doing the same.	creativity adds more fun to spending time with people	With People, Exploratory	Creativity Factors, Idea Types
	28	Es gibt vermutlich auch Menschen, die in ihrem privaten Umfeld deutlich weniger Kreativität haben wollen als ich.	There are probably people who want a lot less creativity in their private environment than me.	wanting less creativity in private environment	Conservative	Idea Commitment
	29	Extrem prozedurale Menschen wollen zum Beispiel von ihrem Beruf heimkommen, zu einer fixen Uhrzeit Abend essen, und dann auch zu einer fixen Uhrzeit schlafen gehen, um dann am nächsten Tag wieder pünktlich aufzustehen.	There are extremely procedural people out there. They enjoy coming home from work, having dinner at a specific time and then go to bed, so that they can wake up in time on the next day.	procedural people like structured lives	Rigid	Creativity Factors
	30	Das kann für kreative Menschen ein grausames Leben sein, es gibt aber auch Menschen, die sich in genau diesen starren Strukturen wohl fühlen.	For creative people, this can be a cruel life. But there are people who enjoy these rigid structures.	cruel for creative people; some people enjoy rigid structures	Uncomfortable, Rigid	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	31	Auf der einen Seite ist Softwareengineering ein stark mathematischer Beruf, was tendenziell eher strukturierte Menschen anzieht, auf der anderen Seite benötigt man für wirklich gutes Software-Engineering sehr kreative Leute.	Software engineering is a job with heavy focus on math. This attracts structured people more. On the other side, you need really creative people for really good software engineering.	software enginering attracts structured people; good software engineering requires creative people	Open	Idea Commitment
	32	Das ist also so eine Art Schnittstelle für Leute, die sich zwar in einem strukturierten Bereich wohl fühlen, aber auch kreativ arbeiten wollen.	So it's kind of an interface for people who feel at home in a structured environment, while also wanting to work creatively.	software engineering is interface for people who are creative and structured	Rigid	Creativity Factors
	33	Bei der Kontaktmesse, hat [der Standortleiter des Standorts Stuttgart] mich dann dazu ermutigt, mich direkt im Online-Bewerbungsportal einzutragen und ich wollte abwarten, was daraus wird, bevor ich mich bei anderen Firmen bewerbe.	At an event for companies and job seeking students, I talked to the site manager of the iteratec Stuttgart site. He encouraged me to enter my data into their online application tool and I decided to wait on that before sending out other applications.	no initial active decision for company	-	-
	34	Ich habe mich dann beim Bewerbungsgespräch sehr wohl gefühlt und dieser Eindruck blieb auch allgemein in der Firma erhalten.	I felt comfortable during the job interview and that feeling also held true while working at iteratec.	feeling comfortable at company	Comfortable	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	35	Ich finde, die Arbeitsumgebung unterstützt extrem die persönliche Entwicklung.	I feel like the work environment extremely supports personal advancement.	work environment supports personal advancement	High Ability	Idea Commitment
	36	Es werden Workshops, sowohl für die persönliche, als auch für die professionelle Entwicklung, angeboten.	The company provides workshops for personal as well as professional growth.	work environment supports personal and professional growth	High Ability	Idea Commitment
	37	Ich fühle mich bei meiner Arbeit wertgeschätzt, ich habe nicht das Gefühl, ausgebeutet zu werden und es macht mir einfach Spaß, mit meinen Kollegen zu arbeiten.	I feel valued during my work there and I don't feel exploited at all. It's fun working with my colleagues.	feeling valued; not feeling exploited; enjoying work with colleagues	With People, Comfortable	Creativity Factors
	38	Bei einem Workshop wurde mir bewusst, dass ich eine sehr externale Person bin und externale Personen ziehen sowohl zur Entscheidungsfindung, als auch zur Selbstvalidierung extrem die Meinung anderer heran.	During a workshop, I learned that I am a very external person. External people use the opinion of others for validating themselves as well as making decisions.	validating themselves via others	With People, External Stimulus	Creativity Factors
	39	Damit ist es für mich deutlich leichter zu akzeptieren, dass ich meine Arbeit gut gemacht habe, wenn mir das jemand so sagt, als wenn ich einfach nur sehe, dass etwas funktioniert.	Therefore, it's a lot easier for me to accept that I did a good job, when others tell me so, in contrast to just seeing that something works.	validation via compliments	Comfortable, With People	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	40	Für mich sind Teambesprechungen ein extremer Motivationsträger, wenn dabei explizit die Leistungen der Teammitglieder und des gesamten Teams hervorgehoben wird.	Team meetings are a big motivation factor for me, if they include explicitly highlighting the performance of team members and the entire team.	motivated by team meetings that highlight team and individual performance	With People, High Ability	Creativity Factors, Idea Commitment
	41	Das gilt jedoch nicht, wenn das in einem zu kitschigen Rahmen stattfindet, also zum Beispiel nach dem Motto: "Jeder sollte mindestens einen positiven Punkt am Gegenüber vorbringen." Das fühlt sich zu sehr an, als wäre man jetzt 'on the spot'.	This doesn't hold, when it happens in way that is to cheesy. For example: "Everyone should name at least one thing they like about one another." That feels more like you're 'on the spot' right now.	dislikes cheesy praise	Uncomfortable	Creativity Factors
	42	Bei meinem letzten Projekt wurde das sehr schön gelöst. Es wurde ein Abschlussreview veranstaltet, bei der man jedem Teammitglied eine anonyme Karte schreibt, was dieses für positive Leistungen gebracht hat und anschließend bekam noch der einen Titel zugewiesen, der diese Leistungen zusammenfasst.	I liked the way it was done in my latest project. There was a concluding review where every team member got an anonymous card. On this card was noted, what positive achievements the team member contributed to the project and also a title which summarized these achievements.	likes anonymous praise	Comfortable	Creativity Factors
	43	iteratec ist sehr gut in der Hinsicht, dass sie es erlauben und unterstützen, dass Leute neue Ideen äußern.	iteratec is very good in that they allow and support people in bringing forth new ideas.	company supports sharing of ideas	Open	Idea Commitment

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	44	Jeder Mitarbeiter kann sich in so gut wie jedem Gremium einbringen, um die Zukunft des Unternehmens zu beeinflussen, das Projekt weiterzubringen, oder einen Vorschlag im Team einzubringen.	Every employee can participate actively in every board they want to and in this way influence the future of the company, further a project or suggest something to the team.	employees have option to participate	High PI, Open	Creativity Factors, Idea Commitment
	45	Man darf auch Kritik vorbringen und es konstruktiv darüber gesprochen.	You can also bring forth criticism and we talk about it in a constructive way.	criticism handled productively	Open	Idea Commitment
	46	Denn auch kritische Äußerungen sind Teil der Kreativität. Man beschäftigt sich mit einem Punkt und überlegt sich verschiedene Wege, damit umzugehen.	Because critical statements are also part of creativity. You think about something and then come up with several ways of handling it.	criticism is creative	Improving Ideas	Idea Types
	47	Eigentlich neigen strukturelle Maßnahmen dazu, Kreativität zu behindern, allerdings denke ich dass Maßnahmen wie der innovation-Freiday der Kreativität helfen, da sie strukturell Freiheiten gewähren.	Structural measures usually hinder creativity. But I think measures like the innovation-Freiday help creativity because they provide structural freedoms.	structural measures hinder creativity; structural freedom supports creativity	Rigid, Flexible	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	48	Einen bestimmten Zeitpunkt einzufordern, zu dem Kreativität erbracht werden muss, halte ich für Kreativitäts-behindernd, jedoch kann es die Kreativität fördern, zu sagen, dass man einen Zeitraum hat, in dem man komplett frei ist, diese Kreativität auszuleben.	Requiring creativity during a specific time span is something I deem a hinderance for creativity. But having a timeframe of total freedom can actually foster creativity.	creativity can't be forced	Flexible	Creativity Factors
	49	Ich glaube, es gibt Zeiten, zu denen ich anders kreativ bin. Zum Beispiel bin ich morgens oder abends im Bett, mehr dazu in der Lage, zu tagträumen.	I think there are time slots when I'm creative in different ways. For example, I'm more able to daydream, when I lay in bed in the morning or evening.	daydreaming while in bed	Roaming Thoughts	Idea Types
	50	Allerdings glaube ich nicht, dass meine Tagesrhythmus einen Zeitraum enthält, zu dem ich besonders kreativ bin.	But I don't think that my daily routine contains a specific time span when I'm especially creative.	no routine time for creativity	Flexible	Creativity Factors
	51	Ich glaube, für mich spielt der Ort weniger eine Rolle, als die Umgebung, wenn es darum geht, kreativ zu sein.	I think that the location plays less of a role for me being creative than the environment.	location playing less role than environment	-	-
	52	Wenn ich gegen eine Person spielen kann, bin ich kreativer, als wenn ich alleine bin.	I'm more creative, when I can bounce off against another person rather than being alone.	more creative when bouncing off other people	With People	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	53	Gleichermaßen bin ich kreativer, wenn ich ein Hintergrundrauschen habe, wie zum Beispiel eine Podcast oder einen Stream, als wenn es still ist.	Likewise, I'm more creative, when I have some kind of background noise like a podcast or a stream. Opposed to complete silence.	more creative with background noise	External Stimulus	Creativity Factors
	54	Wenn ich also etwas habe, was meinen Kopf leicht beschäftigt, bin ich kreativer, als wenn ich mich nur auf die Kreativität konzentriere.	I'm more creative when I have something that occupies my head slightly, than when I only concentrate on my creativity.	more creative with slightly occupied head	Light Thinking	Creativity Factors
	55	Ich würde sagen, es dürfen nicht zu wenige, oder zu viele Leute sein und ich sollte die Leute kennen und mich wohl fühlen, um kreativ zu sein.	To be creative, there shouldn't be too many or too few people and I need to know the people and feel comfortable around them.	sweet spot of people for creativity	With People	Creativity Factors
	56	Wenn ich unter fremden Leuten bin, tendiere ich dazu, nervös zu werden, und mein Denken wird stark strukturell.	My thoughs become very structured and I tend to become nervous, when I'm around new people.	less creative with unknown people	Uncomfortable, With People	Creativity Factors
	57	Unter Leuten, bei denen ich mich wohl fühle und mit denen ich mich auch über Dummheiten unterhalten kann, kann ich meinen Kopf eher kreisen lassen und werde auch eher kreativ.	I can let my thoughts go wild, when I'm around people with whom I feel comfortable and with whom I can talk about all kinds of stupid stuff. This makes me more creative.	more creative when comfortable around people	Comfortable, With People	Creativity Factors
	58	Wenn ich einer starken sportliche Tätigkeit nachgehe, bin ich gar nicht kreativ.	I'm not at all creative, when I participate in exhausting sporty activities.	not creative when doing exhausting sport	Demanding	Creativity Factors

Table A.1: Initial Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	59	Wenn ich aber zum Beispiel spazieren oder joggen gehe, dann bin ich in einer Art Trance und durchaus kreativ.	But I am in a trance-like state when I go running or walking and can be creative during these kinds of activities.	creative when going for a walk or running	Light Activity	Creativity Factors
	60	Die Kreativität, die dabei heraus kommt, ist aber eher so eine tagträumerische und keine produktive Kreativität.	This creativity is more like daydreams and not a productive creativity.	productive creativity vs daydreams	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	61	Ich denke, ich werde während der Arbeitszeit mehr Ideen mit Arbeitsbezug haben.	During work hours, I probably have more ideas with relations to my current work.	mostly problem focused idea generation during work hours	Topic Focus, Cat:Work	Idea Types
	62	Es kommen mir jedoch währenddessen auch andere Ideen, die ich mir für später aufschreibe.	I do however also have ideas during that time, that I note down for later.	some additional ideas during work hours	Roaming Thoughts	Idea Types
	63	Ich glaube aber, dass meine geringe Anzahl an Arbeitsstunden und deren frei Verteilung darauf einen entscheidenden Einfluss haben, da ich arbeiten kann, wann ich Lust darauf habe und so weniger Trennung zu meiner Freizeit existiert.	I do have very few working hours and am free to shift them around freely. This probably has a significant impact on my ideas, because I can work whenever I want and therefore have less of a clear cut between work and free time.	ability to shift working hours impacts idea generation	Flexible	Creativity Factors

Table A.2: Initial Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
02	1	Eine Idee ist für mich ein Gedanke, der etwas schaffen möchte, was noch nicht da ist.	To me, an idea is a thought that wants to create something which does not yet exist.	thought creates not yet existing	New Ideas	Idea Types
	2	Dieses noch nicht da sein ist dabei für mich besonders wichtig.	The none existence is particularly important to me.	none existence important	New Ideas	Idea Types
	3	Denn wenn etwas bereits existiert, dann ist es für mich keine Idee.	If something already exists, then it's not an idea in my opinion.	existing things are not ideas	New Ideas	Idea Types
	4	Es ist auch eine Idee, wenn ich ein bekanntes Verfahren auf ein neues Problem anwenden möchte, denn diese Anwendung ist dann das Neue an der Idee.	Applying an existing process to a new problem is also an idea.	existing process new problem is idea	Improving Idea	Idea Types
	5	Für mich gibt es keinen großen Unterschied zwischen Kreativität und Idee.	I don't see a big difference between creativity and ideas.	no difference between idea and creativity	-	-
	6	Kreativität ist immer dort anwendbar, wo du mit einer Idee etwas schaffen würdest.	You can apply creativity in every scenario where an idea would create something.	creativity is where ideas create	-	-
	7	Kreativität in einer Arbeitsumgebung ist definitiv nützlich und ein Stück weit sogar notwendig.	Creativity in a workplace environment is usefull and in parts even necessary.	creativity in workplace useful	-	-
	8	Allerdings hängt das immer vom Arbeitsumfeld ab und unterscheidet sich dabei stark.	Although that differs based on the workplace environment	differs based on environment	-	-

Table A.2: Initial Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	9	Wenn ich Kassierer an einer Kasse bin, brauche ich deutlich weniger Kreativität, als wenn ich als Programmierer versuche, ein Problem zu lösen.	Cashiers operating a cash register need a lot less creativity than programmers who try to solve a problem	cashiers need less creativity than programmers	Need-Oriented	Idea Types
	10	In meinem persönlichen privaten Umfeld ist Kreativität auf jeden Fall nützlich.	Creativity is definitely useful in my private environment.	Creativity in private environment useful	-	-
	11	Ich bin jemand, der gerne Dinge initiiert und, um überhaupt dort hin zu kommen, braucht man auch Kreativität.	I like initiating things and I need creativity to get there.	Initiative requires creativity	With People, Need-oriented	Creativity Factors, Idea Types
	12	Wenn man eine Graph für jedes Berufsfeld aufstellen würde und dabei die Berufsfelder nach der Erfordernis und Nützlichkeit von Kreativität ordnen würde, dann wäre Softwareentwicklung auf beiden Skalen sehr hoch.	If you were to create a graph sorting professional fields by creativity usefulness and requirement, then software development would be pretty high on both scales	software development is very creative field	-	-
	13	Ich kannte bereits einen Kollegen, der vor mir bei iteratec gearbeitet hat und dieser hat seine Hand für die Firma ins Feuer gelegt.	I already knew another employee who worked at iteratec before me and vouched for the company.	other people commend company	Comfortable	Idea Commitment
	14	Außerdem hatte ich das Gefühl, dass ich [bei iteratec] am meisten lernen kann.	I also felt like I could learn the most [at iteratec].	learning new things	High Ability	Idea Commitment

Table A.2: Initial Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Ich hatte sogar ein Angebot, das finanziell mehr geboten hätte, bei dem ich aber vermutlich weniger gelernt hätte.	I had a job offer with a higher wage, but I thought that I would have learned less at that other company.	Knowledge more important than wage	High Ability, High RD	Idea Commitment
	16	Ich fühle mich sehr gut dabei, für iteratec zu arbeiten.	I feel good working for iteratec	Good feeling with company	Comfortable	Idea Commitment
	17	Es gab natürlich Hoch- und Tiefphasen, aber insgesamt ging es mir immer sehr gut oder gut.	There obviously were highs and lows, but that's the same everywhere.	Highs and lows	Uncomfortable, Comfortable	Idea Commitment
	18	Also in den Hochphasen ging es mir sehr gut und in den Tiefphasen nur gut.	during the highs I felt very good and during the lows only good.	Feeling good even during lows	Comfortable	Idea Commitment
	19	Ich habe bereits bei einer anderen Firma gearbeitet und hatte auch dort das Gefühl gut aufgehoben zu sein.	I already worked at another company and also felt pretty at home there.	Good feeling also with other companies	Comfortable	Idea Commitment
	20	Allerdings war dieses Gefühl dort nur auf bestimmte Personen bezogen.	But there, that feeling was only towards specific people.	Limiting factors at other company	Uncomfortable	Idea Commitment
	21	Außerdem habe ich hier das Gefühl, dass die Firma selbst mehr liefert.	Additionally, I feel like here the company itself offers me more.	iteratec itself offers more	-	-
	22	Die iteratec geht mit neuen Ideen sehr offen und ehrlich um.	iteratec handles new ideas very openly and honestly.	Openness and honesty towards new ideas.	Open	Idea Commitment

Table A.2: Initial Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	23	Das heißt, wenn ich eine Idee habe, dann findet die auf jeden Fall, in irgendeiner Weise, Anklang und jemanden, der zuhört und das auch einordnet.	So, when I have an idea, then it will at least catch on in some way and someone will listen and sort it out.	every idea gets heard	Open	Idea Commitment
	24	Ich glaube nicht, dass das überall der Fall ist.	I don't think that's the case everywhere	not the case everywhere	Conservative	Idea Commitment
	25	Es gibt aber auf jeden Fall auch eine kleine Förderung für Ideen.	There also is some structural support for new ideas	structural support for new ideas	Rigid, Open	Creativity Factors, Idea Commitment
	26	Da gibt es zum Beispiel den Innovation-Freiday, aber es gibt sicher auch Verfahren, die eher inoffiziell sind.	There is for example the innovation-Friday and I'm sure there are other inofficial ways as well.	innovation-Friday and inofficial support	Rigid, Open	Creativity Factors, Idea Commitment
	27	Wo ich besonders kreativ bin, ist meine Freizeit und nicht so sehr im Berufsleben. Die Spielregeln dort nicht ganz so stringent wie im Berufsleben, wodurch ich mehr ausprobieren kann.	I am more creative during my free time and not so much during working hours. The rules are not that strict there, which allows me to try out more things.	trying out more during free time due to less strict rules	Flexible	Creativity Factors
	28	Ich genieße auch den Status, dass ich diese Dinge mit anderen Menschen ausprobieren kann; konkret mein Freundeskreis.	I also enjoy that I can try these things out with other people; i.e. my friends	trying out new things with friends	With People	Creativity Factors
	29	Andere Menschen fördern meine Kreativität, wenn sie daran Teil haben.	Other people increase my creativity if they are part of it.	others can increase creativity when participating	With People	Creativity Factors
	30	Mir kommen Ideen eher, wenn ich alleine bin.	I am more likely to get ideas when I'm alone.	ideas more likely when alone	Alone	Creativity Factors

Table A.2: Initial Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	31	Wenn ich unter Menschen bin, genieße ich eher die Zusammenkunft und habe auch das Gefühl, dass bereits alle kreativen Aufgaben vorher erledigt wurden.	With others, I am more likely to enjoy our company and I feel like all creative tasks have been completed beforehand.	no need for creativity when with others	With People	Creativity Factors
	32	Ich lasse mich aber durchaus inspirieren für Ideen, die ich dann formuliere, wenn ich wieder alleine bin.	What I do is getting inspired so that I can formulate new ideas when I'm alone again	gathering inspiration for later	With People, Alone, External, New Ideas	Creativity Factors, Idea Types
	33	Ich bin definitiv kreativer, wenn ich aktiv bin.	I am more creative when I'm active, for sure.	more creative when active	Light Activity / Demanding	Creativity Factors
	34	Während der Arbeitszeit ist der Raum für Ideen deutlich eingeschränkter.	During work hours, there's a lot less room for new ideas.	less room for new ideas during work hours	Rigid	Creativity Factors
	35	Meine Ideen sind während der Arbeitszeit doch eher Mittel zum Zweck.	My ideas during work hours are more practical.	practical ideas during work hours	Need-Oriented	Idea Types
	36	Dem entgegen, kann ich meiner Kreativität während meiner Freizeit einen größeren Raum geben, wodurch die Ideen eher experimenteller Natur sind.	In contrast, I can offer way more room to my creativity during my free time. This makes the ideas more experimental in nature.	more room for creativity makes ideas more experimental	Flexible, Exploratory	Creativity Factors, Idea Types

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
03	1	Eine Idee ist für mich ein Gedanke, der ein neues Projekt oder einen neuen Ansatz für etwas beinhaltet.	To me, an idea is a thought that includes a new project or a new approach to something.	idea is thought and includes new approach or project	New Ideas	Idea Types
	2	Kreativität ist es, etwas zu gestalten auf eine spezielle Art und Weise, die nicht unbedingt die Neueste ist.	Creativity is shaping something in a special way that is not necessarily the newest.	creativity shapes something; creativity is not necessarily new	Improving Ideas	Idea Types
	3	Es ist also die Fähigkeit, etwas anders zu gestalten oder neue Ideen zu haben.	It is also the ability to do something differently or the ability to have new ideas.	creativity is having new ideas	New Ideas	Idea Types
	4	Es gibt Arbeitsumfelder, wo man eine Tätigkeit immer wieder auf die exakt selbe Art und Weise und ohne Abweichung durchführen muss, weil sonst das komplette System nicht mehr funktioniert. Das ist zum Beispiel am Fließband der Fall. In solchen Arbeitsumfeldern ist Kreativität nicht nützlich.	There are jobs where you need to do execute a task repeatedly in the same way and without deviation. This is the case for assembly line jobs. Creativity is not useful in these kinds of jobs.	creativity not useful in monotone jobs	Inactive	Creativity Factors
	5	Es gibt aber natürlich auch viele Arbeitsumfelder, wo Kreativität sehr nützlich ist.	But there are of course many jobs where creativity is useful	creativity useful in many jobs	-	-

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	6	Das gilt aber natürlich auch nur in Maßen. Denn spätestens, wenn man mit anderen zusammenarbeitet und alle zwei Wochen etwas umstellt, wird das deine Kollegen ziemlich nerven.	Because as soon as you work with others, they will be very annoyed at you if you change stuff all the time.	colleagues may dislike frequent changes	Conservative	Idea Commitment
	7	Gerade bei der Softwareentwicklung muss man immer abwägen, wie man die gegebenen Möglichkeiten auf den aktuellen Anwendungsfall anwenden kann. Da muss man schon kreativ sein.	Especially in software engineering, you have to continuously evaluate how to apply your options to the problem at hand. You have to be creative to do that	problem solving in software engineering requires creativity	Need-Oriented	Idea Types
	8	In der Softwareentwicklung hat man, im Vergleich zu anderen Arbeitsumfeldern, relativ wenige Vorgaben. Da muss man unter Umständen schon sehr kreativ sein, um den use-Case realisieren zu können.	There are very few guidelines in software engineering compared to other fields. This means that you have to be quite creative at times in order to realize a specific use-case.	fewer guidelines leads to higher demand for creativity.	Flexible	Creativity Factors
	9	Kreativität hilft dabei, dass es mir nicht langweilig wird und alles immer auf die selbe Art gelöst wird.	Creativity helps me with not getting bored and with not solving everything always the same way.	creativity helps with not getting bored; creativity supports finding new solutions	Inactive	Creativity Factors

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	10	Kreativität ist in meiner Freizeit nicht wirklich nützlich. Allerdings vollbringt man in der Freizeit generell nicht viel 'Nützliches'.	Creativity is not really useful in my freetime. Although I don't really spend my free time doing 'useful' tasks anyways.	creativity not useful in free time because free time not 'useful'	-	-
	11	Bei mir war iteratec tatsächlich die einzige Firma, die auf meine Bewerbung reagiert hat, aber es hat auch so einfach gepasst. Ich bereue die Entscheidung für iteratec nicht, auch wenn ich nicht die großartige Auswahl hatte.	iteratec was the only company that replied to my application, but I also felt like it was a good fit. Even though I didn't have much of a choice, I don't regret th decision.	good feeling with company	Comfortable	Idea Commitment
	12	Es macht mir Spaß, hier zu arbeiten.	I like working here.	enjoying work at iteratec	Comfortable	Idea Commitment
	13	Ich mag das Umfeld und die Teamarbeit, es ist sehr offen.	I like the environment and the teamwork. There is a lot of openness.	likes environment, teamwork and openness	Comfortable, Open	Idea Commitment
	14	Man wird auch, von Kollegen mit langjähriger Berufserfahrung, nach seiner Meinung gefragt und nicht einfach als Hilfskraft betrachtet.	Even colleagues with year long work experience ask for your opinion and don't just see you as ancillary.	appreciation by experienced colleagues	With People, High Ability, Comfortable	Creativity Factors, Idea Commitment
	15	Ich finde es etwas schade, dass ich den normalen Büroalltag noch nicht wirklich miterleben durfte, da durch die Pandemie alles nur noch Remote stattfindet.	I find it a little sad that I was not able to experience the regular office environment, because everything is remote due to the pandemic.	remote environment is not the real deal	Uncomfortable	Idea Commitment

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	16	Wenn man eine neue Idee hat, findet man immer einen Ansprechpartner, der einen unterstützt.	When you have an idea, you will find someone who will support you.	new ideas get support	New Ideas, Open	Idea Types, Idea Commitment
	17	Eine Möglichkeit bieten zum Beispiel unsere sehr offen gestalteten SLAB[Werkstudenten]-Meetings, wo man solche Punkte einfach und unkompliziert mit auf die Agenda packen kann.	On opportunity are the open SLAB[student lab]-meetings. You can add your topics to their agenda in a simple and uncomplicated manner.	simple and uncomplicated way of bringing in ideas	Flexible, Open	Creativity Factors, Idea Commitment
	18	[Unser Studentenbetreuer] hat dafür auch immer ein offenes Ohr.	[Our student supervisor] is always open for new ideas.	ability to bring up ideas with supervisor	Open	Idea Commitment
	19	Man kann also einfach auf Leute zugehen und wird dann auch ernst genommen.	In summary, you can just walk up to people and they will take you seriously.	being taken seriously	With People, Open, Comfortable	Creativity Factors, Idea Commitment
	20	Außerdem gibt es in Projekten auch relativ wenige Vorgaben. Man bekommt eine Aufgabe und es bleibt einem selbst überlassen, wie man diese Aufgabe lösen möchte. Gerade bei den Studentenprojekten, kann man sich nochmal besonders kreativ austoben.	Additionally there are very few rules in the way you approach new projects. You get a task and then you can decide how you want to solve said task. Especially in student projects, you can run riot with your creativity.	freedom in how to solve project tasks	Flexible	Creativity Factors

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	21	Die Hauptfaktoren, die Kreativität behindern, kann ich nicht wirklich iteratec zuschreiben. Das sind Dinge wie Zeit, Kosten und mangelnde persönliche Fähigkeiten.	The main factors that hinder creativity are not really the fault of iteratec. These include factors like time, cost and a lack of ability.	time, cost and lack of ability hinder creativity	High RD, High Ability	Idea Commitment
	22	Wenn ich einer Routinearbeit nachgehe, wie zum Beispiel Aufräumen oder Staubsaugen, dann kann ich meine Gedanken gut schweifen lassen und bin dann auch besonders kreativ.	When I do routine work like vacuuming and tidying up, I can let my thoughts roam freely. That's when I am especially creative.	mundane tasks let thoughts roam and support creativity	Light thinking, Roaming Thoughts	Creativity Factors, Idea Types
	23	Manchmal passiert das auch, wenn ich durch etwas inspiriert werde, aber das ist immer unterschiedlich.	This also happens sometimes when I get inspired. But that varies greatly.	getting inspired supports creativity	External	Creativity Factors
	24	Es git jetzt niemanden, der meine Kreativität aktiv behindert. Aber manchmal fungieren andere Leute als meine Inspiration. Ein Beispiel dafür ist in Minecraft [einem Computerspiel], wo andere Leute etwas bauen. Das inspiriert mich dann manchmal dazu, etwas ähnliches zu entwerfen.	There is no one who actively hinders my creativity. But sometimes, people function as my inspiration. For example, people building cool builds in Minecraft [a video game]. That occasionally inspires me to build something similar.	watching creative people inspires creativity	With People, External	Creativity Factors

Table A.3: Initial Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	25	Neue Ideen kommen mir eher, wenn ich alleine bin. Ich kann so besser meinen Gedanken nachhängen und über Verschiedenes nachdenken.	I usually come up with new ideas when I'm alone. Being alone helps me to focus more on my thoughts and thinking about multiple things.	being alone helps focusing on thoughts and thinking about multiple things	Alone, New Ideas, Exploratory	Creativity Factors, Idea Types
	26	Wenn ich aktiv bin, bin ich zwar körperlich beschäftigt, aber meist geistig nicht so herausgefordert. Ich kann so besser meinen Gedanken nachhängen, weil meine Hände beschäftigt sind.	When I'm active, I'm physically busy, but not mentally. This helps me getting lost in thought because my hands are occupied.	physical activity supports thinking	Light Activity, Inactive, Roaming Thoughts	Creativity Factors, Idea Types
	27	Während ich relaxe mache ich meist irgendetwas, was mich kognitiv auslastet und habe dann nicht so viele neue Ideen.	When I'm relaxing, I usually do some task that keeps me mentally busy and I don't get a lot of new ideas during that time.	mentally challenging tasks hinder new ideas	Occupied	Creativity Factors
	28	Während der Arbeit sind meine Ideen eher geprägt von Softwaretechnik, also zum Beispiel, wie ich ein konkretes Implementierungsproblem löse.	When I'm at work, my ideas are usually focused towards software engineering. For example, how to solve the implementation problem at hand.	ideas during work time are more problem focused	Topic Focused	Idea Types
	29	Während meiner Freizeit erstrecken sie sich auch auf andere Dinge: App-Ideen, neue Minecraft-Bauwerke oder wie ich meinen Schreibtisch effizienter organisieren könnte.	During free time they also expand to other subjects such as: App ideas, new Minecraft builds or how to arrange my desk more efficiently	broader spectrum of ideas during free time	Exploratory, Roaming Thoughts	Idea Types

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
04	1	Eine Idee ist für mich etwas, was einfach nur in meinem Kopf aufkommt, also ein Gedanke. Das ist nichts, was man präzisieren muss, oder wo man einen genauen Plan haben muss.	An idea is something that just appears within my head. Basically a thought. It's nothing you have to specify or have to have an exact plan about.	ideas are unspecific and thoughts	Roaming Thoughts	Idea Types
	2	Ich würde eine Idee mit einem Gedankenblitz gleichsetzen.	I would equate an idea with a flash of insight.	ideas are flashes o insight	-	-
	3	Kreativität ist für mich die Menge and Ideen, die man hat, die unterschiedlichen Ideen die man hat, aber auch die unterschiedlichen Wege, um ein Ziel zu erreichen.	To me, creativity is a set of ideas that a person has, the different ideas as well as the different ways to reach a goal.	creativity is set of ideas / creativity are different ways to reach a goal	Alternative Ideas	Idea Types
	4	Kreativität ist somit Unterschiedlichkeit.	So, creativity is difference.	creativity is difference	Alternative Ideas	Idea Types
	5	Je nach Arbeitsumfeld ist Kreativität sehr nützlich, insbesondere in meinem Arbeitsumfeld.	Depending on the work environment, creativity is very useful. Especially in my work environment.	creativity is useful in own work environments	-	-
	6	Zur Kreativität gehört es ja auch, sich eigene, neuere und bessere Lösungswege auszudenken.	It's part of creativity to think of newer and better ways of doing something.	finding newer and better ways is part of creativity	New Ideas, Improving Ideas, Alternative Ideas	Idea Types
	7	In artistischen Berufen steht das sowieso außer Frage.	There's no doubt about this in artistic jobs.	artistic jobs need creativity	Cat:Art	Idea Types

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	8	In einem Beruf, in dem man nur am Band steht, braucht man keine Kreativität.	In an assembly line job, you don't need creativity.	assembly line jobs don't need creativity	Inactive	Creativity Factors
	9	Viele Tätigkeiten in meinem privaten Umfeld benötigen nicht besonders viel Kreativität.	Many tasks in my private environment don't require a lot of creativity.	private tasks not very creative	-	-
	10	Beim Sport zum Beispiel, muss ich nicht sehr kreativ sein.	For example during sports, there's no need for me to be creative.	sport doesn't need creativity	Demanding	Creativity Factors
	11	Anders sieht es eher bei Computerspielen aus, wie zum Beispiel Terraria [einem Computerspiel] beim Bauen.	The opposite is true for video games. For example while building in Terraria [a video game].	video games need creativity	Topic Focused	Idea Types
	12	Ein anderes Beispiel ist, wenn ich für mich selbst an einem Programmierprojekt arbeite. Da muss ich eben verschieden Wege finden, um ein Problem zu lösen. Diese Art von Kreativität braucht man da schon.	Another example is working on my own programming projects. I need to find different ways to solve those problems. You need this kind of creativity there.	creativity in programming, finding different ways	Alternative Ideas, Topic Focused	Idea Types
	13	Da ich aber musikalisch komplett unbegabt bin und mein malerisches Können auch noch nicht beweisen konnte, sieht es sonst mäßig aus, mit Kreativität in meinem privaten Umfeld.	Otherwise, i don't really need a lot of creativity in my private environment, as I have no talent in music and my artistic talent is also yet unheard of.	music needs creativity / art needs creativity	Cat:Art	Idea Types

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	14	Bevor ich als Werkstudent bei iteratec angefangen habe, habe ich schon viel gutes über die Firma gehört.	I had already heard a lot of good about the company before I started working there as a student employee.	good reputation	-	-
	15	Ich kannte auch einige Leute, die dort bereits gearbeitet habe und die konnten auch nur Gutes berichten.	I already knew some people who worked there before me and they only told me good things.	recommendation by peers	-	-
	16	Dann gab es noch Faktoren wie die sehr gute Platzierung bei "Great Place to Work" und auch bei anderen Umfragen und Auszeichnungen waren sie ganz vorne mit dabei.	Other factors were the very good placement at "Great Place to Work" and other rankings were they got top marks.	top marks at various rankings	-	-
	17	Nach der Uni hat es mir so gut gefallen, dass ich dort einfach weiterarbeiten wollte. Ich kannte die Leute, ich kannte die Projekte und ich wusste, dass wir gut zusammen passen.	I liked working there so much that I just continued working there after I finished university. I knew the people, the projects and I knew that we were a good fit.	liked working at company	Comfortable	Idea Commitement
	18	Außerdem waren die Themengebiete interessant und nicht immer nur dasselbe.	Additionally, the topics were quite interesting and not the same every time.	interesting topics	High PI	Creativity Factors
	19	Bei meinem ehemaligen Arbeitgeber hatte ich das Problem, dass die Arbeit keine wirkliche Abwechslung bot.	At my previous employ I had the problem that there wasn't really any variety in the work.	lack of variety	Low PI	Creativity Factors

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	20	Vor allem die Herausforderung und die Abwechslung haben mich bei iteratec gehalten.	What kept me at iteratec was the variety and the challenges	variety and challenges	High PI, External	Creativity Factors
	21	iteratec ist eine Firma, bei der ich stolz bin, dort zu arbeiten.	I'm proud about working for a company like iteratec.	proud to work there	Comfortable	Idea Commitement
	22	Es gibt niemanden, der etwas wirklich negatives berichtet. Es fühlt sich einfach gut an.	There is no one who has anything to complain about. It just feels good working there.	other employees also satisfied	With People, Comfortable	:Cf, Idea Commitement
	23	Wenn ich über meine alte Firma gefragt wurde, was und wie wir arbeiten, dann waren meine Antworten eher langweilig. Bei iteratec ist das nicht so.	When someone asked me about my previous employer and the work there, my answers were pretty boring. With iteratec that's different.	intersting things to tell	High PI	Creativity Factors
	24	Grundsätzlich treffen neue Ideen hier auf ein offenes Ohr. Wenn jemand einen Vorschlage bringt, dann wird dieser zumindest angenommen und es wird überlegt, ob man ihn umsetzen kann. Zumindest habe ich das bisher in jedem Team so wahrgenommen.	New ideas find a friendly ear here. When someone proposes something, then it will at least be accepted and evaluated. At least, that's my experience in every team so far.	friendly ear for new ideas / ideas accepted and evaluated	Open	Idea Commitement
	25	Auch in der Geschäftsstelle wird immer überlegt, wie wir uns verbessern können.	This also holds for the management. They always think about ways to improve ourselfs.	management lives improvement	Improving Ideas, Open	Idea Types, Idea Commitement
	26	Insgesamt würde ich sagen, dass ich eher so mittelmäßig kreativ bin.	I think my creativity is pretty average.	average creativity	-	-

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	27	Ich glaube nicht, dass es einen bestimmten Ort gibt, an dem ich besonders kreativ bin.	I don't think there's a specific place where I'm especially creative.	no specific place for creativity	-	-
	28	Meistens bin ich kreativ, wenn ich gerade nicht an etwas anderes denke, wenn ich also abschalten kann.	I'm mostly creative, when I don't have something else to think about. When I can just shut down.	no active thoughts for creativity	Inactive	Creativity Factors
	29	Das kann zum Beispiel sein, wenn ich abends im Bett liege, wenn ich spazieren gehe, oder wenn ich unter der Dusche stehe.	That can be when I'm walking, when I lay in bed during the evening or when I take a shower.	creative when walking, laying in bed or showering	Relaxing, Light Activity	Creativity Factors
	30	Wenn ich mich nicht mehr auf eine bestimmte Sache konzentrieren muss, kann ich meinen Gedanken einfach ihren freien Lauf lassen.	I can just let my thoughts run lose when I don't have to concentrate on a specific task.	creative when thoughts run lose	Roaming Thoughts	Idea Types
	31	Wenn ich aktiv bin, fokussiere ich mich meist auf eine Sache. Deswegen bin ich kreativer, wenn ich mich entspannte.	When I'm active, I usually focus on one specific task. That's why I'm more creative when I'm relaxing.	focusing on specific task when active / more creative when relaxing	Relaxing, Topic Focused	Creativity Factors, Idea Types

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	32	Die pure Anwesenheit von anderen Personen bringt nichts für meine Kreativität. Aber, wenn die andere Person auch kreativ ist, oder wenn wir uns gut verstehen und eine Idee zusammen aufbauen oder weiterführen, könnte das schon helfen.	The mere presence of other people does nothing for my creativity. But if the other person is creative as well or if we get along well and build up a new idea together, that can be quite helpfull.	creative people stimulate creativity	With people, External	Creativity Factors
	33	Wenn ich unter Leuten bin, dann gibt es eher diesen Anstoß, der mich dann auf Ideen bringt.	When I'm with other people, then I'm more likely to get this initial impulse that gives me new ideas.	other people give impulse for new ideas	With People, External	Creativity Factors
	34	Wenn ich aber Brainstormen will und schon eine grobe Richtung habe, dann glaube ich, dass es alleine einfacher ist. Alleine bin ich weniger abgelenkt. Es ist also so ein Zwischending.	If I want to brainstom and already have a rough direction, then it's easier working alone. I'm more concentrated while being alone. So, it's somewhere in between.	more concentrated while being alone / brainstorming easier	Alone, Topic Focused	Creativity Factors, Idea Types
	35	Auf der Arbeit konzentriere ich mich meist sehr stark auf die Probleme, die gerade vor mir liegen. Dadurch habe ich dort weniger die Kreativität außerhalb dieser Problemlösung, sondern bin eher fokussiert auf diese eine Sache. Im Vergleich zu meiner Freizeit habe ich dann weniger Kreativität und neue Ideen.	While working, I concentrate on the task at hand. This leads to me being less creative outside of finding solutions for the current problem. I have less ideas there compared to my free time.	only problem focused creativity at work	Topic Focused	Idea Types

Table A.4: Initial Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	36	Vereinzelt habe ich trotzdem noch andere Ideen, aber das passiert eher selten.	Occasionally I still have other ideas as well, but that's the exception.	occasional ideas apart from current objective	Roaming Thoughts	Idea Types

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
05	1	Eine Idee ist etwas, was nicht existiert oder nicht existieren muss.	An idea is something that doesn't exist or doesn't have to exist.	idea doesn't exist	New Idea	Idea Types
	2	Sie ist weder etwas greifbares, noch ein Gefühl. Sie ist eine sehr abstrakte Entität.	It's neither touchable nor a feeling. It's an abstract construct.	idea is abstract	-	-
	3	Zusammenfassend ist eine Idee ein Konzept, ein Ding, eine Sache, die nicht zwangsläufig existiert, mit der Intention das zu ändern.	In summary, an idea is a concept, a thing that doesn't necessarily exist with the intention to change that.	idea is concept with intention to exist	New Idea	Idea Types
	4	Kreativität ist, wenn ich mein Wissen und meinen Erfahrungsschatz kombiniere und daraus etwas neues schaffe.	Creativity is combining my knowledge and experience to create something new	Creativity combines knowledge and experience and creates something new	New Ideas, Composite Ideas	Idea Types
	5	Kreativität ist etwas, was ein Computer nicht kann. Ein Computer kann bestehendes Wissen kombinieren und auch Lücken füllen, die wir als Menschen übersehen hätten, aber er tut sich schwer, neue Konzepte zu finden.	Creativity is something a computer can't do. Computers can combine existing knowledge and fill gaps that humans overlook. But it struggles coming up with new concepts.	computers unable to be creative	-	-
	6	Das ist ein ganz klares Ja. Kreativität ist in nahezu jedem Umfeld nützlich.	That's a yes from me. Creativity is usefull in almost every field.	creativity useful at work	-	-

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	7	Das Klischee der IT ist ja, dass Kreativität hier nicht so wichtig ist. Dem widerspreche ich vehement! Darunter fällt es nicht nur, schöne Benutzeroberflächen zu machen, sondern genauso, ein schönes Backend zu entwerfen.	There's a cliche that IT is not creative. I vehemently object that! Not does our creativity include designing good-looking UIs, but also nice backends.	creativity in IT	Cat:Work	Idea Types
	8	Es mag sein, dass es Berufe mit strikten Prozessen gibt, wo Kreativität nicht immer hilfreich ist, aber grundsätzlich ist Kreativität in den allermeisten Bereichen sehr wichtig.	There may be jobs with strict processes where creativity is not helpful all the time, but usually creativity is quite usefull.	creativity less useful in jobs with strict structures	Rigid	Creativity Factors
	9	Kreativität im Privatleben ist leider etwas, was man als Erwachsener sehr stark ausgeprügelt bekommt. Ich sehe das vermehrt bei Freunden, die davon bereits sehr viel verloren haben und das auch selbst sehr bedauern.	As an adult you get discouraged from having creativity in your private life. I see that with a lot of friend of mine who have lost lots of their creativity and really regret that.	adults less creative; creativity can be lost	External	Creativity Factors
	10	Dabei gibt es auch im Erwachsenenleben sehr viele Bereiche, in denen Kreativität nützlich ist. Sei es, wie man den eigenen Wohnraum einrichtet, wie man die Urlaubsplanung angeht, oder gemeinsame Zeit mit anderen Menschen oder Familie gestaltet.	Even though there are a lot of areas in adult life where creativity is useful. Be it for designing your own living space or for planning your holydays.	creativity useful for adults	Cat:Seeing a Need	Idea Types

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	11	Ich halte es für sehr wertvoll, dass man sich auch mal hinsetzt und einfach eine Runde tagträumt.	I find it quite precious to sit down and just do a bit of daydreaming.	daydreaming is creative and important	Roaming Thoughts	Idea Types
	12	Wenn ich zehn verschieden Menschen nehme und ihnen allen sage, sie seien kreativ, dann kommen dabei sehr verschiedene Antworten heraus. Die Ausprägung davon kann sehr sehr unterschiedlich sein.	If I selected ten different people and told all of them that they were creative, then I would get very different answers out of it. Its manifestation can vary greatly.	creativity is individualistic	-	-
	13	Ich würde sagen, dass das [die Ausprägungen der Kreativität] zwar alles das Gleiche ist, aber dass es sich sehr unterschiedlich zeigt.	I would say all those manifestations are in essence the same, but their results would be quite distinct.	creativity has different results	Alternative Ideas	Idea Types
	14	Bei iteratec hatte ich immer das Gefühl, dass eine gewisse Vielfalt da ist.	I always felt that iteratec has a lot of diversity.	diversity	-	-
	15	Ich habe auch eine gewisse Entscheidungsmacht und kann je nach Projekt mal mehr, mal weniger Einfluss nehmen und meinen Input geben.	I have some form of decision making power and depending on the project I can have more or less influence and give input.	influence on project	High Ability	Idea Commitement
	16	Es fühlt sich sehr unbefriedigend für mich an, wenn ich einfach nur als Code-Monkey den Code herunterschreiben muss.	Purely typing code like a code monkey feels very unsatisfying to me.	influence on project	Low Ability, Uncomfortable	Idea Commitement

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	17	Ich möchte stattdessen lieber ein Produkt erstellen, dass eine gewisse Note hat und maßgeschneidert auf den jeweiligen Kunden passt.	Instead, I'd like to create a product that fits the respective cutomer perfectly.	customer satisfaction	High PI, High Wil, High Ability	Creativity Factors, Idea Commitement
	18	Andererseits bietet die Firma iteratec natürlich auch einen gewissen Freiraum mit den innovation-Freidays.	On the other hand, iteratec offers its employees a certain level of freedom in the form of innovation-Fridays.	freedom to be creative	Rigid, Flexible, Open	:Cf, Idea Commitement
	19	Außerdem unterdrückt die Firma meine Kreativität nicht.	Company doesn't suppress employees creativity.	creativity not suppressed	Open	Idea Commitement
	20	Wenn überhaupt kommt so etwas nur vom Kunden. Das fällt mir vor allem auf, wenn ich sehe, wie manche Kunden mit ihren eigenen Mitarbeitern umgehen.	EIf anything I see that with some of our customers. I notice that when I look at the way they treat their own employees.	customers suppress creativity	Conservative	Idea Commitement
	21	Wir haben 500 kreative Leute und damit natürlich auch 500 kreative Ausprägungen. Das bedeutet, dass die Firma ein paar Möglichkeiten anbieten kann und ein gewisser Teil wird sich hier kreativ entfalten können und ein weiterer Teil wird dies nicht können.	We have 500 creative people and therefore 500 different manifestations of creativity. So, the company can offer possibilities that some employees can use to be creative while others can't.	creativity requirements are individualistic	-	-

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	22	Natürlich ist die iteratec ein gewinnbringendes Unternehmen, was bedeutet, dass man natürlich auch Geld reinbringen muss.	iteratec is a profitable company of course. So, they they have to earn money somehow.	profit-oriented	High RD	Idea Commitement
	23	Aber ich denke, dafür hat man das ganz gut gelöst mit ausreichend Freiraum, keinen übermäßig komplexen Prozessen und den innovation-Tagen.	But I think they handle it quite well with enough personal freedom, no overly complex processes and the innovation-Freidays.	personal freedom, no complex processes and innovation-Freidays	Flexible, Comfortable	Creativity Factors, Idea Commitement
	24	Es werden auch teilweise in Projekten Entscheidungen getroffen, die nicht unbedingt die wirtschaftlichsten sind, aber die Mitarbeiter voran bringen.	Some of the decisions in projects are made in a way that is not necessarily the most profitable, but instead supports employees' professional growth.	professional growth	High Ability	Idea Commitement
	25	Die Prozesshürden sind auch sehr gering, um die Kreativität auszuleben.	The obstacles posed by processes are very low as well.	low process obstacles	Flexible	Creativity Factors
	26	Jeder muss sich natürlich selbst dafür einsetzen und man bekommt keinen Tritt in den Hintern. Es gäbe natürlich Leute, die das wollen, aber andere würden sich damit nicht wohl fühlen.	Everyone has to become active themselves of course and you don't get a kick in the arse. Some people would like that, but others wouldn't.	self motivation	High PI, High Wil	:Cf, Idea Commitement

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	27	Ich denke, iteratec hat hier einen Weg gefunden, der für ein Unternehmen mit 500 Mitarbeitern ganz gut passt.	I think iteratec found a way that works for a company with 500 employees.	company size impacts measures	-	-
	28	Ich arbeite gerne her am Standort mit den Kollegen zusammen, es gibt aber auch Kunden, da würde ich kündigen, wenn ich für die arbeiten müsste.	I like working on site with my colleagues. But I would quit if I had to work with certain customers.	working with colleagues; dislike certain customers	With People, Uncomfortable	Creativity Factors, Idea Commitement
	29	Die Firma versucht natürlich schon, ein Gemeinschaftsgefühl aufzubauen, womit ich mir persönlich ein wenig schwer tue.	The company tries to build some kind of community spirit. I don't really identify myself with that.	community spirit	With People, Comfortable	:Cf, Idea Commitement
	30	Ich bin hier am Standort und ich bin gerne derjenige, der dem Kunden dabei hilft, seine Ziele umzusetzen. Wenn das klappt, bin ich da durchaus auch stolz drauf.	I work here on site and I like being the person who helps the customer achieve their goal. If that works out, then I'm proud of my work.	proud of work	High Ability, Comfortable	Idea Commitement
	31	Ich finde es sehr angenehm, dass ich bei iteratec ein Netz aus erfahrenen Kollegen habe, auf die ich zugehen kann.	I like having experienced colleagues here at iteratec whom I can talk to.	experienced colleagues	High Ability	Idea Commitement

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	32	Ich denke schon, dass ich kreativ bin. Das kommt natürlich immer darauf an, mit wem man sich vergleicht. Aber ich ärgere mich schon, wenn ich das nicht sein kann.	I do believe that I'm a creative person. Of course it always depends on who you compare yourself to. But I get really frustrated when I can't be.	frustrated when unable to be creative	Uncomfortable, Low Ability	Idea Commitement
	33	Wenn irgendwelche Themen sehr schwierig sind, dann leidet meine Kreativität durch Schlafmangel und so weiter und ich finde das sehr unangenehm.	When I have to deal with difficult tasks, then my creativity suffers due to sleep deprivation and I find that very unpleasant.	difficult tasks hinder creativity; forced lack of creativity is unpleasant	Occupied, Uncomfortable	Creativity Factors, Idea Commitement
	34	Es gibt Phasen, Zeiten und Plätze, wo ich sehr kognitiv leistungsfähig und kreativ sein kann. Ich tue mir jedoch sehr schwer damit, dies festzunageln und reproduzierbar zu machen.	There are phases, times and places when I'm particularly creative and cognitively capable. But I struggle with fixing and reproducing them.	phases, times and places; difficult to reproduce	Flexible	Creativity Factors
	35	Ab und zu bin ich zum Beispiel schon in Cafés gegangen und fand das ganze Hintergrundrauschen sehr angenehm. An anderen Tagen wiederum, brauche ich das gar nicht.	From time to time I go to cafés. I like the background noise there. On other days, I can't have that.	cafés; background noise	External Stimulus	Creativity Factors
	36	Grundsätzlich klappt das aber besser an Orten, die ich gewohnt bin, als an Orten, die mir fremd sind.	It usually works better at places I'm used to rather than places that are foreign to me.	places I'm used to	Rigid, Comfortable	Creativity Factors, Idea Commitement

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	37	Ansonsten hilft es auch, wenn ich mal einen Tag alleine bin, dann kurz rausgehe und einen Spaziergang mache.	It also helps, when I can just go outside, be alone and go for a walk.	going for a walk	Light Activity	Creativity Factors
	38	Ich bin kreativ, wenn ich mit meinen Gedanken alleine bin.	I'm creative when I'm left alone to my thoughts.	left alone to thoughts	Alone	Creativity Factors
	39	Also beim Sport, beim spazieren gehen, da arbeite ich am meisten im Kopf.	For example during sports or going fo a walk. That's when my brain works best.	sports	Light Activity	Creativity Factors
	40	Leute, die wenig Empathie oder ständig schlechte Laune haben sind eine Katastrophe für mich.	People with little empathy or who are in a bad mood all the time are a catastrophe for me.	little empathy and bad mood	With People	Creativity Factors
	41	Wenn Leute aber Begeisterung haben, oder auch ein wenig anziehen können, da kann ich komplett mitziehen.	But people who are enthusiastic or who can carry me along. Those really get me going.	enthusiastic and carry along	With People, External	Creativity Factors
	42	Ich umgebe mich deswegen auch eher mit Leuten, die mir gut tun und auch meiner Kreativität gut tun. Ich habe einen Freundeskreis, der sehr unkreativ ist und das kann schon teilweise frustrierend sein, weil da einfach kein Gegenpart da ist.	That's why I surround myself with people who are good for me and my creativity. I have one circle of friends that is quite uncreative. That can be frustrating at times because of the lack of a creative counterpart.	surrounding with specific people	With People, External	Creativity Factors
	43	Ich generiere Ideen eher alleine und verifiziere sie dann, wenn ich unter Leuten bin.	I tend to generate ideas on my own and later verify them when I'm with others.	generate alone, verify with others	Alone, With People	Creativity Factors

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	44	Eine Idee selbst ist nicht so viel Wert, man muss sie dann auch verifizieren und ausführen.	An idea in and on itself is not worth much. You also have to verify and execute it.	unverified and -implemented idea has little worth	High Will	Idea Commitement
	45	Es kommt natürlich immer auf die Idee an. Wenn mir die Meinung anderer wichtig ist, dann verifiziere ich sie, ansonsten mache ich einfach mal.	Of course that depends on the idea. When I want to hear other people's opinions, then I verify the idea. Otherwise, I just do it.	verification not always needed	With People	Creativity Factors
	46	Ich unterteile mein Leben in Phasen, in denen ich produziere und in Phasen, in denen ich konsumiere. Wenn ich konsumiere, bin ich furchtbar unkreativ, und sehr kreativ wenn ich produziere.	I divide my life into productive phases and consuming phases. When I'm consuming, then I'm terribly uncreative.	productive phases vs. consuming phases	Inactive, Occupied	Creativity Factors
	47	Ich bin kreative wenn ich produktiv bin. Das kann sein, wenn ich Sport mache, wenn ich schreibe, wenn ich Leuten helfe oder wenn ich programmiere.	I'm creative when I'm productive. That may be the case when I'm exercising, writing or helping people with programming.	creative while productive; creative while exercising, writing or helping people with programming	With People; Demanding, Light Activity	Creativity Factors
	48	Sport ist für mich im Prinzip ein mentaler detox. Der Kopf muss sich dabei entspannen und das fungiert für mich als eine Art Reset.	Basically, sport is a mental detox for me. The head can relax during exercising and that functions as kind of a reset for me.	reset head when exercising	Demanding	Creativity Factors

Table A.5: Initial Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	49	Ich unterteile Ideen in Tagträumereien und konkrete Ideen. Für konkrete Ideen muss ich mich tatsächlich hinsetzen und darüber nachdenken. Tagträumereien sind eher so ein ausweichen aus der Tätigkeit, der ich gerade nachgehe.	I split ideas into daydreams and concrete ideas. Concrete ideas require you to sit down and think about the topic. Daydreams are more a escape strategy from the task I'm doing right now.	concrete ideas require concentration; daydreams are escape strategy	Topic Focused, Roaming Thoughts	Idea Types
	50	Auf der Arbeit habe ich schon gelegentlich Tagträumerreien, während ich zu Hause fast ausschließlich konkrete Ideen habe.	I do have some daydreams when I'm at work. But when I'm at home, I have concrete ideas almost exclusively.	some daydreams at work; concrete ideas at home	Roaming Thoughts, Topic Focused	Idea Types

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
06	1	Eine Idee hat etwas neues und spontanes an sich.	An idea is something spontaneous.	idea is spontaneous	-	-
	2	Sie wurde vielleicht auch durch einen vorherigen Prozess eingeleitet.	It may have been inducted by a preceding process.	processes can induct ideas	Improving Ideas	Idea Types
	3	Im Prinzip ist eine Idee ein neuer Gedankengang.	An idea is basically a train of thought.	ideas are trains of thoughts	-	-
	4	Kreativität ist für mich das Vorhandensein von neuen Ideen.	Creativity is the existence of new ideas	creativity is existence of new ideas	New Ideas	Idea Types
	5	Sie geht auch oft mit künstlerischen Tätigkeiten einher, also etwas Neues zu schaffen.	It often appears together with artistic tasks i.e. creating something new.	creativity linked to artistic tasks	Cat:Art	Idea Types
	6	Eine Idee muss nicht zwingend etwas schaffen, aber bei Kreativität liegt der Fokus deutlich mehr hierauf.	An idea does not necessarily have to create something. But with creativity, there's more focus on that aspect	creativity has more focus on creating	New Ideas	Idea Types
	7	Beim Arbeiten wird die Kreativität mehr dafür genutzt, um neue Wege zu gehen.	At work, creativity is used to try out new ways.	try out new ways	Alternative Ideas	Idea Types
	8	Es geht auch darum, auch ungedachte Gedanken und generell neues auszuprobieren. Dabei ist Kreativität definitiv nützlich.	It's also about trying out previously unthought thoughts and new things in general. Creativity is definitely useful in that way.	trying out unthought thoughts and new things	New Ideas	Idea Types

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	9	Bei bestimmten Jobs wie Kassierern oder Fließbandarbeiterern ist dies deutlich weniger der Fall, außer es geht darum, bestehende Prozesse zu verbessern.	With certain jobs like cashier or assembly line workers that's not as much the case, except for improving existing processes.	cashiers and assembly line workers need less creativity	Inactive	Selective
	10	Wenn ich so an die Menschen in der Informatik denke, ist Kreativität nicht das Erste, was mir dazu einfällt. Von der Aufgabenstellung her kann Kreativität aber definitiv nützlich sein.	Creativity is not the first word that corsses my mind when I think about people in IT. Although, looking at it from a task perspective, creativity can be useful in that field.	IT not associated with creativity; creativity can be useful for IT tasks	-	-
	11	Ich denke schon, dass Kreativität in meinem private Umfeld nützlich ist.	I do believe that creativity is useful in my private environment.	Creativity useful in private environment	-	-
	12	Vor allem im Bereich Hobbies, künstlerische Betätigung und Ausprobieren von Neuem kann Kreativität viel Freude und persönlichen Fortschritt bringen.	Especially in areas like hobbies, artistic tasks and trying out new things can creativity yield a lot of joy and personal advancement.	hobbies and artistic tasks are creative; creativity yield joy and personal advancement	Cat:Hobbies, Cat:Art	Idea Types
	13	Außerdem ist da natürlich noch der Konsum von Kreativität anderer Menschen.	Then there's also the consumption of other people's creativity.	other people's creativity can be consumed	External	Creativity Factors
	14	Ich glaube, es gibt mindestens eine künstlerische Kreativität und eine sachliche Kreativität nd vermutlich noch deutlich mehr.	I think there's at least an artistic creativity and a factual creativity. There are probably even more.	artistic creativity and factual creativity	-	-

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Iteratec bot mir eine Mischung aus einem guten Praktikumsgehalt und einem Wertebild, das mir sehr zusagt.	iteratec offered me a mixture of a good wage for my internship and company values that I agree with.	payment and company values fit	Comfortable	Idea Commitment
	16	Be iteratec gibt es mehr dieses Gemeinschaftsgefühl als bei anderen Firmen, wobei das natürlich auch daran liegen könnte, dass ich bei den anderen Firmen nicht so lange gearbeitet habe. Außerdem mag ich den speziellen Schlag an Menschen, der hier arbeitet.	iteratec has this community spirit that other companies are lacking. Although I may only perceive it that way because I haven't worked long enough at other companies. I also like the special kind of people who work here.	more community spirit than other companies; likes people	With People, Comfortable	Creativity Factors, Idea Commitment
	17	Ich glaube, es gibt hier eine grundsätzliche Offenheit für Kreativität, aber meistens fehlt die Zeit.	I think there's a general openness towards creativity, but there often isn't enough time	openness towards creativity; creativity needs time	Open, High RD	Idea Commitment
	18	Es wird allerdings ein begrenzter Rahmen in Form der innovation-Fridays gegeben.	There is some limited room in the form of the innovation Fridays.	innovation Fridays offer room for creativity	Rigid, Open	Creativity Factors, Idea Commitment
	19	Ein anderer Kreativitätsbehindernder Faktor ist das Thema Buchung und, dass man darauf achtet, dass die Auslastung sehr hoch ist. Man hat ein gewisses Kontingent und alles darüber hinaus muss man absprechen.	Another factor that hinders creativity is the booking topic and the focus on high utilization. You have a certain contingent and everything above that has to be coordinated.	booking and high utilization hinder creativity	Occupied, Rigid	Creativity Factors

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	20	Ich denke schon, dass dieser starre Rahmen Kreativität eher zurückhält.	I do believe that this strict frame limits creativity.	strict frame limits creativity	Rigid	Creativity Factors
	21	Ich bin bei vielen Dingen nicht übermäßig talentiert, abr ich probiere gerne neue, kreative Dinge aus.	In lots of things, I'm not overly creative. But I do enjoy trying out new things.	not overly creative; enjoys trying out new things	New Ideas, Exploratory	Idea Types
	22	Ich versuche zum Beispiel immer wieder, Instrumente zu lernen und gerade versuche ich, zeichnen zu lernen und kleine Comics zu designen.	For example I regularly try learning an instrument and at the moment I try to learn how to draw and also draw small comics.	learning instruments and drawing	Cat:Art	Idea Types
	23	Besonders kreativ bin ich vor allem abends und natürlich unter der Dusche.	I'm especially creative during the evening and while taking a shower.	creative during evening and while taking showers	Relaxing	Creativity Factors
	24	Die Dusche ist einfach prädestiniert dafür: Wenig Ablenkung, viel Entspannung.	Showers a just predestined for this: Little distraction, much relaxation	shower limits distraction ad offers relaxation	Relaxing, Alone	Selective
	25	Andere Menschen können sowohl neue Ideen geben, als auch neue Gedankengänge anstoßen.	Other people can give me new ideas as well as trigger new trains of thought.	other people give ideas and trigger trains of thought	With People, External	Creativity Factors

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	26	Vor allem, wenn man sich unter Menschen wohlfühlt, kann das durchaus nochmal zur Kreativität beitragen. Wenn man sich jedoch unter den Menschen unwohl fühlt, dann kann das die eigenen Kreativität auch ganz schön behindern	Especially, feeling comfortable around specific people can add to your creativity. When you don't feel comfortable, that can limit your creativity quite a bit.	feeling comfortable around people increases creativity; feeling uncomfortable decreases it	With People, Comfortable, Uncomfortable	Creativity Factors, Idea Commitment
	27	In Face-To-Face-Gesprächen mit vertrauten Menschen bekomme ich häufig neue und auch kreative Ideen.	When talking face to face with trusted people, I often get new ideas.	new ideas when talking face to face to trusted people	With People, External, Comfortable	Creativity Factors, Idea Commitment
	28	In größeren Menschengruppen ist dies weniger der Fall, außer ich bin komplett außen vor und habe meine Ruhe.	In larger crowds thats seldomly the case except for when I'm completely out.	interacting with large crowds hinders creativity	With People, Occupied	Creativity Factors
	29	Ansonsten bin ich auch alleine kreativ.	I'm also creative when I'm alone.	creative when alone	Alone	Creativity Factors
	30	So lange ich etwas eher montones mache, bei dem ich meinen Gedanken nachhängen kann, kann ich auch kreativ sein.	As long as I do something monotone that allows me to dwell in my thoughts I can be creative.	creative while doing monotone tasks and dwelling in thoughts	Inactive, Roaming Thoughts	Creativity Factors, Idea Types
	31	Der entscheidende Faktor ist, wie viel Leerlauf mein Gehirn gerade hat.	The determining factor is the amount of idling my brain is allowed to do.	amount of idling determines creativity	Inactive	Creativity Factors

Table A.6: Initial Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	32	Es hilft auch, wenn ich äußere Reize habe, aber keinen Zwang, darauf zu reagieren.	it also helps having external impulses but without the necessity to react to them.	external impulses without necessity to react to them help creativity	External	Creativity Factors
	33	In meiner Freizeit habe ich weniger fachliche Ideen. Die kommen mir eigentlich nur während der Arbeitszeit.	In my free time I have less technical ideas. Those only appear during working hours.	technical ideas only during working hours	Need-Oriented	Idea Types
	34	Künstlerische Ideen wiederum kommen mir sowohl während der Arbeitszeit, als auch während meiner Freizeit.	Artistic ideas also appear during working hours as well as in my free time.	artistic ideas appear at all times	Cat:Art	Idea Types

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
07	1	Eine Idee ist ein Gedanke, der sich aus einem gewissen Umfeld ergibt. In einem Arbeitsumfeld wäre das ein Gedanke, er sich aus der Arbeit ergibt. Sei es eine Idee zu einem Projekt, an dem ich gerade arbeite, eine Idee in einem Prozess, an dem ich beteiligt bin, oder einfach die Idee, dass ich jemanden treffen möchte.	An idea is a thought that arises from a specific environment. In a work environment, this would be a thought that arises from work. Be it an idea about a project I'm currently working on, an idea in a process in which I'm involved in or simply the idea to meet someone.	idea arises from environment	Topic Focused	Idea Types
	2	Eine Idee ist also ein Einfall, etwas das mir in den Kopf kommt.	An idea is basically an insight, something that appears in my head.	ideas appear in the head	-	-
	3	Kreativität ist ein Skill, der dabei hilft, innerhalb eines betehenden Rahmens, etwas neues zu entwickeln.	Creativity is a skill that helps with creating something new within given limits.	creativity is skill; creativity helps creating something new	New Ideas	Idea Types
	4	Dass man also kleine oder große Alternativen findet, durch Impulse, die man irgendwo her bekommt.	So that you can find large or small alternatives from impulses with diverse sources.	creativity finds alternatives from impulses	Alternative Ideas	Idea Types
	5	Meine Erfahrungen aus verschiedenen Umfeldern führen mich zu neuen Ideen.	My experiences from different fields lead me to new ideas.	experiences lead to ideas	New Ideas, Composite Ideas	Idea Types

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	6	Ich glaube, Kreativität ist in allen Arbeitsumfeldern nützlich, die Informatik stellt dort keine Ausnahme dar.	I believe creativity is useful in all professional fields and IT is not an exception.	creativity useful in all professional fields	-	-
	7	In meinem private Umfeld gibt es mehrere Ausprägungen an Kreativität.	There are multiple manifestations of creativity in my private environment.	multiple manifestations of creativity	-	-
	8	Dazu zählt zum Beispiel die Kreativität in der Beschäftigung mit meinen Kindern. Ich könnte mich mit meiner Tochter zusammensetzen und einfach einer Bastelanleitung aus dem Internet folgen, ich könnte mir aber auch, mit ihr zusammen, eine Klopapierrolle anschauen und überlegen, was man daraus basteln könnte.	One of them is the creativity which lies in interacting with my kids. For example, I could just look up a tutorial from the internet and do the crafting together with my daughter. Alternatively, we could take an empty roll of toilet paper and see what we can make from it.	taking roll of toilet paper and see what one can make from it	Topic Focused, Exploratory	Idea Types
	9	Oder auch, wenn sich der Zeitplan, durch äußere Einflüsse verschiebt, damit kreativ umzugehen und neue Möglichkeiten zu finden.	Also, when a timetable changes due to external factors, you have to handle that in a creative way and find new options.	handle changing timetables in a creative way	Cat:Work, Need-Oriented	Idea Types
	10	Oder, wenn ich beim Blick in den Kühlschrank überlege, was ich daraus kochen kann.	Also, when I look in the fridge and think about what to cook with the ingredients I have.	combining ingredients from fridge in creative ways	Exploratory	Idea Types

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	11	Die Ausrichtung der Firma passt zu meinen Neigungen, also ich mag Software-Entwicklung und iteratec entwickelt Software.	The company's orientation fitted my preferences. i.e. I like software development and iteratec develops software.	campany orientation fits preferences	-	-
	12	Der Kulturelle Fit passte auch, also die Menschen, die ich kennen lernte schienen auch in Ordnung zu sein.	I also liked the people whom I met. So the cultural fitwas great.	liked the people	With People, Comfortable	Creativity Factors, Idea Commitment
	13	Außerdem arbeitet iteratec eher regional und nicht so sehr überregional. Das gefällt mir, da ich kleine Kinder habe und deswegen nicht so viel reisen möchte.	iteratec also operates on a regional level and not on a transregional level. I have small children and therefore don't want to travel regularly. So I enjoy this regional focus	likes regional focus; has small children	-	-
	14	Mir gefallen die Aufgaben und ich habe die Freiheiten, die ich brauche und möchte.	I like the tasks and I have the freedoms I need and want.	likes tasks and has enough freedoms	Flexible	Creativity Factors
	15	Die Menschen, mit denen ich zusammenarbeiten darf, haben ein hohes Niveau und passen in ihrem Denken und Handeln sehr gut zu dem, was ich mag.	The people I work with have a high professional standard and their thinking and acting fits mine very well.	high professional standard and thinking and acting fits	High Ability	Idea Commitment

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	16	Ich denke, der sehr spezielle Bewerbungs- und Auswahlprozess trägt hier stark dazu bei, dass diese Breite an hochqualifizierten, hilfsbereiten und auch sehr freundlichen Menschen erhalten bleibt.	The special recruiting and selection process here contributes strongly to preserving this breadth of highly qualified, helpful and friendly people.	highly qualified, helpful and friendly people	With People, High Ability	Creativity Factors, Idea Commitment
	17	iteratec schafft den Freiraum für neue Ideen und zwar nach individuellem Gutdünken.	iteratec creates the open space for new ideas at your own individual discretion.	open space for new ideas at own discretion	Flexible, Open	Creativity Factors, Idea Commitment
	18	Zum einen steht jedem ein gewisses Budget bereit, um eigene Ideen zu verfolgen.	On the one hand every employee has a certain budget for implementing own ideas.	budget for implementing ideas	High RD	Idea Commitment
	19	Der Mitarbeiter oder die Mitarbeiterein wird auch motiviert, eigene Ideen einzubringen und es wird niemandem ein Maulkorb verpasst.	The employees also get encouraged to introduce their own ideas and nobody is shut down.	everyone encouraged to introduce new ideas	Open	Idea Commitment
	20	Man hat also den Freiraum, eine Idee einmal auszuprobieren und wenn diese Idee Früchte trägt oder realistischer wird, dann wird das auch gerne aufgegriffen und weitergeführt.	You have the freedom to try out new ideas and if that idea bears fruit or gets more realistic, it oftentimes gets taken up and continued.	freedom to implement ideas; realistic ideas often get continued	Flexible, Open	Creativity Factors, Idea Commitment
	21	Es gibt aber auch einen limitierenden Faktor und zwar, dass wir am Ende des Tages Geld verdienen müssen.	There is a limiting factor though. At the end of the day we have to earn money.	having to earn money is limiting factor	High RD	Idea Commitment

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	22	Ein weiterer Punkt ist, wenn die Auslastung eines einzelnen zu hoch wird. Denn Kreativität braucht auch ein gewisses Maß an Freiheit, um sich zu entfalten.	Another point is high utilization of an individual. Creativity needs a certain amount of freedom to flourish.	high utilization limits freedom and therefore creativity	Rigid, High RD	Creativity Factors, Idea Commitment
	23	Ich denke, ich bin durchaus kreativ.	I do think I'm creative.	being creative	-	-
	24	Kreativität kann ich ja durch einen geführten Prozess stimulieren. Es gibt Kreativitäts-Techniken in der Moderation, um von bekannten Dingen auf neue zu schließen. Das ist etwas, was typischerweise in einem digitalen oder reellen Besprechungsraum stattfindet, also in einer Gruppe.	You can stimulate creativity with a managed process. There are certain techniques for creativity, that allow to get from known thing to new ones. Typically, that is something you do in a digital or real meeting room, i.e. in a group.	managed techniques for stimulating creativity typically in groups	With People, Rigid, Open	Creativity Factors, Idea Commitment
	25	Weitere Ideen bekomme ich auch, wenn ich Spazieren gehe oder Rad fahre; wenn mein Geist also frei denken kann.	I further get new ideas, when I go for a walk or go cycling; So, when my mind can thing freely.	mind can think freely while going for a walk or cycling	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	26	Es gibt Menschen, die mir Impulse geben, indem sie Dinge tun, indem sie mich inspirieren, wie sie an Probleme herantreten.	There are people who giv me new impetus by doing things, by inspiring me in the way they confront problems.	other people give new impetus	With People, External	Creativity Factors

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	27	Ein Freund von mir ist Architekt und wenn wir uns treffen, dann bekomme ich dadurch Ideen für meine eigene Arbeit. Die Themenfelder sind zwar verschieden, aber Herangehensweisen können trotzdem ähnlich sein.	A friend of mine is an architect. I get new ideas for my own work whenever we meet. The topics differ, but the ways of approaching them can be quite similar.	new ideas from talking to people from other fields; similar approaches to different problems	With People, External	Creativity Factors
	28	In gruppendynamischen Prozessen wie zum Beispiel Brainstorming stimuliert auch eine Idee die andere.	In processes that rely on group dynamics like brain storming, one idea also stimulates the next one.	ideas stimulate each other in group processes	With People, External	Creativity Factors
	29	Dementsprechend können Leute sowohl förderlich als auch hinderlich sein für Kreativität bei mir oder auch anderen.	Therefore other people can be foster as well as hinder my or other people's creativity.	people can foster as well as hinder creativity	With People, External	Creativity Factors
	30	Ein klassisches Beispiel für Behinderung ist hier die Sätze: "Das haben wir schon immer so gemacht.", "Das war noch nie so." und "Das geht gar nicht."	A classic example of how to hinder creativity are sentences like: "We always did it that way.", "It never worked that way." and "This won't work."	certain sentences hinder creativity	With People, Conservative	Creativity Factors, Idea Commitment
	31	Ich bekomme neue Ideen sowohl unter Menschen, als auch alleine. Das gibt sich nicht viel.	I get new ideas when I'm with people as well as alone. There isn't much of a difference.	amount of surrounding people doesn't matter for getting new ideas	With People, Alone	Selective

Table A.7: Initial Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	32	Ich glaube, ich bin kreativer, wenn ich eine nebenläufige Handlung habe. Das betrifft aber eher meine persönliche Kreativität.	I think I'm more creative when I have some concurrent task running. But that's more my personal creativity.	more creative while doing concurrent task; personal creativity	Light Activity	Creativity Factors
	33	Bei mir gibt es in Sachen Kreativität keinen Unterschied zwischen Arbeits- und Freizeit.	In terms of my creativity there is no difference between work hours and free time.	work hours or free time don't matter for creativity	-	-

B Second Interviews

Table B.1: Second Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
01	1	Ich habe weder eine spezielle Zeit, noch einen speziellen Ort, an dem ich besonders kreativ bin.	I have neither a time nor a place where I'm particularly creative.	no time, no place	Flexible	Creativity Factors
	2	Vor allem, wenn man mit anderen kreativen Leuten zusammen ist, kann man Ideen gegeneinander hochspielen. Wen eine Person etwas sagt, kann daraus bei einer anderen Person eine Idee entspringen. Bei drei Personen kann diese Idee dan potenziell bei zwei dieser Personen entstehen und so weiter.	You can play ideas against each other, especially whilst being with other creative people. One person saying something can spark an idea withing the other person. With three people, up to two can have an idea and so on.	talking and listening can spark ideas	With people, External	Creativity Factors
	3	Ich würde meine Definition einer Idee maximal noch generischer fassen. Beim notieren der Ideen, habe ich mich oft gefragt, ob etwas bereits als Idee zählt.	If anything, then I would make my definition of an idea even more generic. While I was writing down ideas, I often wondered whether something already counts as an idea.	unclear whether some things count as ideas	-	-
	4	Ich habe zum Beispiel mit einem Freund einen strategischen Shooter gespielt. Es ist eindeutig eine Idee, wenn ich nach einem taktischen Plan gefragt werde.	For example, I played a strategic shooter with a friend. It clearly is an idea, when I get asked for a strategy.	coming up with strategies in strategical shooter is idea	Cat:Hobbies, Topic Focused	Idea Types

Table B.1: Second Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	5	Aber, wenn ich vor zwei Türen stehe und abwäge, durch welche der Gegner kommt, ist das eine Idee?	But is it also an idea, when I stand in front of two doors and theorize through which one the enemy will enter?	deducting other person's decision might be idea	-	-
	6	Mir kamen Ideen wie, dass ich einmal ein Cook-Together mit meinen Freunden veranstalten könnte dass ich einem kranken Freund ein bestimmtes Hausmittel empfehlen könnte, dass ich noch Einkaufen gehen könnte. Also wirklich so spontane Einfälle.	I had the ideas that I could plan a cook-together with friends, that I could suggest a home remedy to a sick friend and that I could go shopping. Those are all really spontaneous ideas.	cook-together with friends, home remedy for sick friend, shopping; spontaneous ideas	New Ideas, Roaming Thoughts, Cat:Hobbies, Cat:Seeing a Need	Idea Types
	7	Andererseits kamen mir auch Ideen im Arbeitskontext. Zum Beispiel, dass mein aktueller Arbeitsaufwand umsonst war, da ich die Daten viel direkter verarbeiten kann. Also einfach Gedanken, die beim Arbeiten daran aufkommen.	On the other hand, I also had ideas in the work context. For example, that my efforts might be in vain, because I can process the data in a much more direct way. So basically thoughts that appear while working on a problem.	contextual ideas while working on project	Topic Focused, Cat:Work	Idea Types
	8	Ich hatte auch einige Ideen beim spielen von Computerspielen. Leider konnte ich diese nicht alle aufschreiben, da ich vom Spiel unter Zeitdruck stand.	I also had some Ideas while playing video games. Unfortunately, I was not able to write them all down, because I was under time pressure due to the game.	unable to write down some ideas due to time pressure	-	-

Table B.1: Second Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	9	Es stellt sich natürlich die Frage, ob ich beim Spielen kreativer bin, oder ob das Spiel mir einfach mehr Probleme entgegenwirft, die es zu lösen gilt.	The question is, of course, whether I'm more creative while gaming or whether the game just throws me more problems to solve.	video games give problems to solve	Need-Oriented, Topic Focused, Cat:Hobbies	Idea Types
	10	Ich habe Ideen hauptsächlich dann notiert, wenn ich gerade einfach nur halbprokrastinierend da saß und mir etwas einfiel, was ich noch tun wollte.	I mostly wrote down ideas when I was half procrastinating and remembered something I still wanted to do.	writing down ideas while half procrastinating	-	-
	11	Darunter fällt zum Beispiel auch, dass mir zwei Serien eingefallen sind, die ich einem Freund empfehlen wollte.	This includes for example, two shows that I wanted to recommend to a friend.	idea to recommend shows to a friend	Cat:Hobbies	Roaming Thoughts
	12	Grob lassen sich meine Ideen einteilen in die Kategorien "Das kann ich jetzt machen", "So kann ich das lösen" und "Das wäre interessant zu tun".	My ideas can roughly be categorized into "I can do that right now", "I can solve this that way" and "That would be interesting to do".	3 categories of ideas	-	-
	13	Als ich Hunger hatte, kam mir die Idee, dass ich mir beim Frischemarkt etwas and der warmen Theke holen könnte.	When i was hungry, I had the idea to get something to eat at the hot-food-counter of the local fresh market.	idea on how to to get food after feeling hungry	Need-Oriented, Cat:Seeing a Need	Idea Types
	14	Im Gespräch mit einer Person kam mir eine Idee, dass ich meinen Gesprächspartner mit etwas Necken möchte.	While talking to a person, I had the idea to tease said person a little bit.	idea to tease someone	Topic Focused	Idea Types

Table B.1: Second Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Bei Korrekturlesen einer wissenschaftlichen Arbeit kam mir die Idee, dass mein Nebensitzer die Anmerkungen für mich mitschreiben könnte.	While proof-reading a scientific paper, I had the idea to let the person next to me write down my remarks.	idea to delegate some work	Topic Focused	Idea Types
	16	Dann hatte ich die Idee, meine Mutter nach dem Namen eines Online-Bücherflohmarkts zu fragen. Und wo ich diese Idee hier gerade sehe, fällt mir auf, dass ich das komplett vergessen habe. Das muss ich mir unbedingt für nachher merken!	Afterwards, I had the idea to ask my mom for the name of an online flea market for books. And I just noticed that I completely forgot about that. I have t remember that for later!	idea to ask someone for info; remembering idea due to writing it down	Recurring Ideas, Need-Oriented, Cat:Seeing a Need	Idea Types
	17	Dann habe ich eine Werbung für ein Event gesehen und dachte mir, dass ich das einmal in unserem Freundeskreis ansprechen könnte.	I saw some advertisement for an event and got the idea of suggesting it to my firends.	event idea from advertisement	Exploratory, Cat:Hobbies	Ideas Types
	18	In Summe hatte ich also nahezu immer eine Input, der die Idee getriggert hat.	In summary, I almost always had some form of input that triggered the idea.	input triggers ideas	External, Internal	Creativity Factors
	19	Viele Ideen, die ich direkt umsetzen konnte, habe ich auch direkt umgesetzt.	Many ideas that I was able to implement immediately, I did implement immediately.	ideas implemented immediately, if possible	Low RD	Idea Commitment

Table B.1: Second Interview 01 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	20	Ideen, die ich nicht weiterverfolgt habe, sind vor allem Ideen, die eine zeitliche Komponente haben und die innerhalb dieser zeitlichen Komponente, durch neue Informationen, invalidiert wurden.	Ideas that I didn't follow through on usually have a temporal component and were invalidated during that temporal component due to new information.	ideas with temporal component invalidated before being implemented	High RD	Idea Commitment
	21	Vor allem, wenn zwischen dem Aufkommen der Idee und der frühest möglichen Umsetzung viel Zeit verging, habe ich die Ideen deutlich seltener umgesetzt. Beim Bücherflohmarkt zum Beispiel, habe ich meine Mutter nach aufkommen der Idee recht lange nicht getroffen und deswegen die Idee wieder vergessen.	Especially, when there was a lot of time between getting an idea and the earliest time said idea could be implemented, I was a lot less likely to implement them. Let's take the idea with the flee market for books as an example. After having this idea, I didn't meet my mom for a long time. That's why I forgot about that idea.	more likely to forget idea after long time between generating and implementing idea	High RD	Idea Commitment

Table B.2: Second Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
02	1	Meine Definition von Idee und Kreativität hat sich nicht verändert.	My definition of idea and creativity hasn't changed.	-	-	-
	2	Es fällt mir schwer, ein Muster in den Ideen zu erkennen.	I'm having a hard time finding a pattern in my ideas.	no obvious pattern	-	-
	3	Eine Idee war in einem Arbeitskontext. Eine Diskussion hatte sich verrannt und es kam mir die Idee, die Diskussionspunkte zu visualisieren.	one idea was in the context of work. A discussion was stuck and I had the idea to visualize the discussed points.	discussion got stuck; idea to visualize discussed points	With People, Need-Oriented, Cat:Work	Creativity Factors, Idea Types
	4	Später, in meiner Freizeit, kam mir die Idee, Fahrgruppen zu bilden, damit es nur eine dedizierten Fahrer gibt.	Later, during my free time, I had the idea to carpool, so that there is only one dedicated driver.	idea to carpool	Improving Ideas, Cat:Hobbies	Idea Types
	5	Am Wochenende hatte ich die Idee, duschen zu gehen, während ich auf das Laden eines Spiels warten musste.	During the weekend I had the idea to take a shower while waiting for a game to load.	waiting for game to load; idea to take shower	Roaming Thoughts	Idea Types
	6	Samstagabend hatte ich Ideen für Kartenspiele oder -tricks, die man austauschen kann.	At Saturday evening I had the idea to for some cardgames and card tricks to share.	idea for some cardgames and card tricks to share	Composite Ideas, Exploratory, Cat:Hobbies	Idea Types

Table B.2: Second Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	7	Sonntagmorgen kam mir eine Idee bezüglich eines Computerspiel-Turniers, das ich veranstalte. Da kam mir die Idee, die Teilnehmer vorab mal Teamweise in konkrete Termine einzuladen, damit sich die Leute kennen lernen können.	Sunday morning I had an idea about a video game tournament, I'm organizing. I had the idea to invite the participants teamwise into meetings. This way, the teams had a chance to get to know each other.	idea to invite tournament participants to meetings	Cat:Hobbies	Selective
	8	Auch Sonntag kam mir die Idee, den Teilnehmern, die sich bereits kennen, asynchron zu schreiben, da diese den Termin nicht brauchen.	Also on sunday, I had the idea to contact the teams that already know each other asynchronously, as they don't need the meeting.	idea to connect some teams asynchronously	Improving Ideas, Topic Focused, Cat:Hobbies	Idea Types
	9	Sonntagabend hatte ich die Idee, mit einem dieser Teams das Spiel zu spielen.	Sunday evening I had the idea to play the game with one of the teams.	idea to play game	Cat:Hobbies	Idea Types
	10	Montagmorgen kam mir die Idee, einen Account zu beantragen, den ich für die Arbeit im Home-Office brauche.	Monday morning I had the idea to request an account that I need for my work during home office.	idea to request account	Need-Oriented, Cat:Work	Idea Types
	11	Auch Montagmorgen kam mir die Idee, eine Wikiseite für Sprintergebnisse zu erstellen.	Also Monday morning, I had the idea to create a wiki page for sprint results.	idea to create web page for sprint results	Need-Oriented, Cat:Work	Idea Types
	12	Eine weitere war es, Musik anzumachen.	Another idea was to listen to some music.	idea to listen to some music	Roaming Thoughts, Cat:Hobbies	Idea Types

Table B.2: Second Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	13	Montagmittag hatte ich die Idee, für den Folgetag ein Auto auszuleihen, um damit ins Office zu fahren.	On Monday afternoon I had the idea to borrow a car for driving to the office.	idea to borrow a car	Need-Oriented Cat:Seeing a Need	Idea Types
	14	Montagabend: Eine Messenger-Gruppe für die Turnierorganisation erstellen	Monday evening: Creating a messenger group for the organization of the tournament.	idea to create messenger group	Cat:Hobbies	Idea Types
	15	Dienstagmorgen kam mir eine Idee, mit der ich eine Datenbankabfrage optimieren könnte.	Tuesday morning I had an idea towards optimizing a database query.	idea to optimize database query	Improving Ideas, Cat:Work	idea Types
	16	Dienstagmittag kam mir einmal mehr die Idee, Diskussionspunkte zu visualisieren. Diese Idee kommt mir immer dann, wenn ich merke, dass wir uns in einer Diskussion verlaufen.	Tuesday afternoon I once again had the idea to visualize some discussed points. I have this idea every time we get stuck in a discussion.	idea to visualize discussed points; same idea whenever discussion gets stuck	Recurring Ideas, Need-Oriented, Cat:Work	Idea Types
	17	Dienstagabend kam mir die Idee, dass ich dem Team Bescheid geben sollte, bevor ich etwas an der Dev-Umgebung ändere. Üblicherweise ändern wir um diese Uhrzeit nichts mehr daran.	Tuesday evening I had the idea to notify my team about some changes, I wanted to introduce to the dev environment. We usually don't change things that late.	idea to notify team about changes	Need-Oriented, Topic Focused, Cat:Work	Idea Types
	18	Auch Dienstagabend kam mir die Idee nachzufragen, ob ich [dem Interviewer] meine gesammelten Ideen vorab zukommen lassen sollte.	Also on Tuesday evening I had the idea to ask [the interviewer] whether I should send them my collected notes in advance.	idea to inquire about sending notes	-	-

Table B.2: Second Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	19	Später am selben Abend kam mir die Idee, diese Woche den Wocheneinkauf zu übernehmen, da meine Frau derzeit krank ist.	Later on the same evening, I had the idea to take over grocery shopping for this week, as my wife is sick right now.	idea to take over grocery shopping	Need-Oriented, Cat:Seeing a Need	Idea Types
	20	Mittwoch 16:00 kam mir die Idee, dass fehlende Rechenleistung der Grund für ein Problem im Projekt sein könnte.	On Wednesday at 4 pm I had the idea that a lack of memory could be the cause of a problem in our project.	idea that missing memory might be cause of problem	Cat:Work	Idea Types
	21	Mittwoch 21:00 kam mir die Idee, früher ins Bett zu gehen, wegen eines frühen Termins am Folgetag.	On Wednesday at 9 pm I had the idea to go to bed early due to an early appointment on the next day.	idea to go to bed early due to appointment	Need-Oriented	Idea Types
	22	Ich habe nahezu alle dieser Ideen sofort umgesetzt. Ich habe bei jeder Idee zumindest versucht, sie zu kommunizieren.	I implemented almost all of these ideas immediately. At the very least, I tried to communicate every single one of my idea.	implement or communicate ideas immediately	High Will	Idea Commitment
	23	Ob etwas daraus geworden ist, steht natürlich auf einem anderen Blatt. Gerade bei den Gesellschaftspielen wurden natürlich auch ein paar nicht weiterverfolgt.	Whether the implementation was successful is an entirely different bag of worms. Especially with the card games, there have been some that were not pursued.	communication doesn't imply successful implementation	-	-
	24	Ideen, die ich sofort im Code ausprobieren konnte, habe ich auch sofort umgesetzt. Manchmal erfolgreich, manchmal nicht.	I obviously immediately implemented ideas, that I was able to try out in code directly. Sometimes successfully, sometimes not.	idea implementation does not imply successful idea implementation	High Will, High Ability	Idea Commitment

Table B.2: Second Interview 02 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	25	Mir viel es insgesamt schwer, Ideen von Gedankenanstößen zu trennen. Ich habe allerdings sehr bewusst versucht, das zu trennen und Gedankenanstöße nicht aufzuschreiben.	I had a difficult time separating ideas from thought triggers. I did however try to separate the two and only write down ideas.	ideas and trigger thought hard to differentiate; tried to only write down ideas	-	-
	26	Wenn eine Idee ein kreativer Gedanke ist, dann ist ein Gedankenanstoß ein Gedanke ohne den Zwang, kreativ zu sein. Ein Gedanke kann ein Kommentar sein, eine Wertung, ...	If an idea is a creative thought, then a trigger thought is a thought without the need to be creative. A thought can be a comment, a rating, ...	ideas are creative thoughts; trigger thoughts need not be creative	-	-
	27	Bis auf sehr wenige Ausnahmen hatte ich während der Arbeitszeit nur arbeitsbezogene Ideen.	With very few exceptions, I had only work related ideas during work hours.	only work related ideas during work hours	Cat:Work, Topic Focused	Idea Types
	28	Es gibt keinen Ort und keine Zeit, zu der ich besonders kreativ bin.	There's no place or time when I'm particularly creative.	no time, no place	Flexible	Creativity Factors
	29	Andere Leute geben mir Vorlagen für Ideen, indem sie sich ganz normal mit einem Thema beschäftigen.	Other people give me templates for new ideas by just engaging with a topic.	ideas from other people engaging with topic	With People, External	Creativity Factors
	30	Bis auf die Idee mit den Gesellschaftspielen hatte ich alle Ideen alleine.	With the exception of the card games, I came up with all of my ideas while being alone	more ideas while being alone	Alone	Selective
	31	Ich bin definitiv kreativer, wenn ich aktiv bin.	I'm definitely more creative while being active.	more creative while active	Light Activity, Demanding	Creativity Factors

Table B.3: Second Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
03	1	Meine Definitionen haben sich nicht verändert.	My defintions haven't changed.	-	-	-
	2	Eine Idee, die ich hatte war ein cooles Lernspiel für E-Learning. Vor allem jetzt, während Corona, könnte das sehr cool sein. Die Spiele, die ich von früher kannte, waren alle nicht so gut. Diese Idee hatte ich Montag um 17:00	On idea I had was a cool educational game for E-Learning. That could be really cool, especially now, during the pandemic. The games I knew from when I was younger were all not particularly good. I had this idea on monday at 5 pm.	idea for e-learning educational game	Need-oriented, Cat:Seeing a Need	Idea Types
	3	Eine weitere Idee war ein besseres Konzept für Scrollbars. Ich hätte hier gerne einen neuen Standard, da die vorhanden Lösungen sich alle suboptimal anfühlen. Diese Idee hatte ich um 18:15 auch Montags, als ich mich gerade mit der Vielzahl an Scrollbars in dem Tool Overleaf herumschlagen musste.	Another idea I had was a better concept for scroll bars. I would like a new standard here as existing solutions are all pretty suboptimal. I had this idea on monday at 6:15 pm, when I was confronted with the tool Overleaf.	idea abut new concept for scrollbars; using tool with many scroll bars.	Improving Idea, Need-Oriented, Cat:Seeing a Need	Idea Types
	4	Die nächste Idee, hatte ich mittwochmorgens um 11:15 während eines WebEx-Meetings. Und zwar hatte ich eine Idee, die die Bildschirm-Teilen-Funktion dieses Tools maßgeblich verbessern würde.	The next idea came to me during a WebEx meeting on Wednesday morning 11:15 am. The idea was about majorly improving the screen share function of said tool.	idea that improves screen share function of WebEx; during WebEx meeting	Improving Ideas, Need-Oriented, Cat:Seeing a Need	Idea Types

Table B.3: Second Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	5	Als weitere Idee kam mir, mit den neuen Marketing-icons von iteratec ein Spiel zu basteln. Diese Idee kam mir donnerstags um 09:00 während meiner Freizeit.	Another idea was creating a game with the new iteratec marketing icons. I had that idea on Thursday 9 am.	idea to create game with new marketing icons	Cat:Hobbies	Idea Types
	6	Als nächstes kam mir eine App-Idee, die dabei helfen könnte, dass man nicht für jede Funktion eine eigene App benötigt. Das war ebenfalls am Donnerstag um 09:00.	Next, I had an idea for an app that avoids having to download another app for every little function. That was Thursday 9 a as well.	idea for universal app	Need-Oriented, Cat:Hobbies	Idea Types
	7	Die dritte Idee, die mir in diesem Zeitslot kam war ein transportabler Rucksackbeamer mit integrierter Stromversorgung.	The third idea I had during that time slot was a portable backpack projector with integrated power supply.	idea for backpack projector	Cat:Seeing a Need	Idea Types
	8	Die nächste Idee, war ein Verbesserungsvorschlag für Power Point. Diese Idee kam mir Freitagabend um 20:00.	The next idea was an improvement for Power Point. I had that idea on Friday evening at 8 pm.	idea for Power Pont improvement	Improving Ideas, Cat:Seeing a Need	Idea Types
	9	Am Samstag, beim Abendessen kam mir die Idee für einen Tellerwärmer, der das Essen warm hält, bis man fertig ist.	While having dinner on Saturday, I had the idea for a plate warmer that keeps your food warm until you're done with it.	idea for plate warmer.	Need-Oriented, Cat:Seeing a Need	Idea Types
	10	Bei manchen Ideen wüsste ich nicht einmal, wie ich sie verwirklichen soll.	With some ideas, I have no idea how to implement them.	lack of Knowledge on how to implement idea	Low Ability	Idea Commitment

Table B.3: Second Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	11	Andere kann ich auch nicht verwirklichen, da es sich zum Beispiel um Erweiterungen von Closed-Source-Produkten handelt.	Others, I'm not really able to implement due to the underlying software being closed-source.	can't implement ideas in closed-source software	Low Ability	Idea Commitment
	12	Bei manchen Ideen hatte ich schlichtweg und ergreifend nicht die Motivation, sie umzusetzen.	With some ideas, I just didn't have the motivation to implement them.	lack of motivation to implement idea	Low Will	Idea Commitment
	13	Ich glaube schon, dass einige dieser Ideen nützlich sind.	I do believe that some of these ideas might be useful.	ideas useful	-	-
	14	Bei manchen Ideen könnte mir die Iteratec bestimmt helfen, andere liegen wiederum außerhalb unseres Fachbereichs. So, wie ich die iteratec kennen gelernt habe, glaube ich nicht, dass sie für einige dieser Ideen der richtige Ansprechpartner wäre.	iteratec might be able to help me with some of these ideas. Others lie outside of their area of expertise. The way I came to know iteratec, I just don't think they are the right company for some of these ideas.	company support limited to area of expertise	Low Ability	Idea Commitment
	15	Die allermeisten meiner Ideen beziehen sich auf Software. Das liegt daran, dass ich mich in diesem Feld am meisten auskenne, und mich auch mehr damit beschäftige als mit anderen Feldern.	Most of my ideas take place in the field of software. That's due to the fact that most of my expertise is in this field and also because I engage more with this field compared to others.	most ideas in preferred field/field of expertise	High Ability	Idea Commitment

Table B.3: Second Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	16	In anderen Bereichen fehlt mir meist das nötige Know-How, um mir dort tiefergehende Gedanken zu machen, die dann zu Ideen führen.	In other fields I lack the necessary know-how to have deep thoughts that lead to ideas.	lack of know-how in other fields; deep thoughts lead to ideas	Low Ability	Idea Commitment
	17	Wenn man einen Use-Case erlebt, für den es keine Software gibt, kommt man auf die Idee, daran etwas zu ändern.	When you encounter a use-case for which no software exists yet, then you get the idea to change that.	unsupported use-case leads to new ideas	Need-Oriented	Selective
	18	Die Idee für das Spiel kam mir während einer Autofahrt. Ich bin da einfach meinen Gedanken nachgehangen.	I had the idea for the game while driving my car. I just indulged in my thoughts then.	new ideas while driving car/indulging in thoughts	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	19	Die Idee für das E-Learning-Tool kam mir, während ich Nachhilfe gegeben habe.	I had the idea for the e-learning tool while tutoring.	idea for e-learning tool while tutoring	Topic Focused	Idea Types
	20	Ich habe weder eine spezielle Zeit, noch einen speziellen Ort, an dem ich besonders kreativ bin.	I have neither a time nor a place where I'm particularly creative.	no time, no place	Flexible	Creativity Factors
	21	Ideen kommen mir vermehrt, wenn ich meinen Gedanken nachhänge. Zum Beispiel kamen mir drei Ideen, während ich Auto gefahren bin.	Ideas appear more often when I indulge in my thoughts. I had for example three ideas while driving my car.	ideas while indulging in thoughts	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	22	Andere Leute beeinflussen meine Kreativität nicht wirklich.	Other people don't really influence my creativity.	other people don't influence creativity	With People	Creativity Factors

Table B.3: Second Interview 03 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	23	Ideen bekomme ich eher alleine.	I am more likely to come up with ideas when I'm alone.	more ideas when alone	Alone	Creativity Factors
	24	Ideen bekomme ich beim relaxen, oder wenn ich stupiden Aufgaben nachgehe, über die ich nicht nachdenken muss.	I get ideas when I'm relaxing or while doing mindless tasks that require no thinking.	more ideas while doing mindless tasks	Inactive, Relaxing, Light Activity	Creativity Factors
	25	Wie kreativ ich bin, hängt vom Thema ab.	It depends on the topic, how creative I am.	topic influences creativity	-	-
	26	Wenn es zum Beispiel darum geht, etwas zu dekorieren bin ich gar nicht kreativ. Bei Lösungen für konkrete Probleme bin ich schon eher kreativ.	For example, I'm not creative at all when it comes to decorating. But when it comes to solutions to concrete problems, I am creative.	more creative when finding solutions to concrete problems; not creative when decorating	High Ability	Idea Commitment

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
04	1	Meine Definitionen haben sich nicht verändert.	My defintions haven't changed.	-	-	-
	2	Am Mittwochabend habe ich meinen Schreibtisch angesehen und mir überlegt, dass ich mein Mikrophon anders platzieren könnte. An seiner alten Position ging es mir immer ein wenig im Weg um. Das habe ich dann auch gleich umgesetzt.	On Wednesday evening I looked at my desk and decided to move my microphone to a different position. It always was a bit of an inconvenience at its old location. I got that done immediately.	idea to relocated microphone; done immediately	Cat:Seeing a Need, High Will	Idea Types, Idea Commitment
	3	Um 20:00 habe ich an einer eigenen App programmiert und hatte die Idee, verschiedene Arten von Keys in meiner Datenbank zu unterstützen.	At 8 pm I worked on one of my own apps and had the idea to use different kinds of database keys.	idea to use different kinds of database keys	Improving Ideas, Topic Focused, Cat:Hobbies	Idea Types
	4	Um 22:30 des selben abends hatte ich die Idee, Klimmzüge zu machen.	At 10:30 pm on the same evening, I had the idea to do some pull-ups.	idea to do pull-ups	Cat:Hobbies	Selective
	5	Am Donnerstag gab es auf der Arbeit ein Problem mit einer unbekannten Variablen in einem Shell-Script. Da kam mir eine Idee, warum diese Variable unbekannt sein könnte.	During work o Thursday there was a problem with an unknown variable in a shell script. I had an idea on why this variable might be unknown.	idea why variable is unknown	Cat:Work	Idea Types

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	6	Donnerstagmittag hatte ich eine Idee, wie man einen Button umgestalten könnte, der zuvor nicht ganz ins Programmbild passte.	On Thursday at noon I had an idea on how to redesign a button that previously didn't quite fit the aesthetic of the progam.	idea on how to redesign button	Improving Ideas, Cat:Work	Idea Commitment
	7	Am Donnerstagabend habe ich den Kabelsalat unter meinem Schreibtisch gesehen und hatte die Idee, den zu sortieren und ich bin wirklich zufrieden mit dem Ergebnis.	On Thursday evening I noticed the cable clutter below my desk and decided to sort it. I'm really pleased with the result.	idea to sort cable clutter; pleased with result	Exploratory, Cat:Seeing a Need	Idea Types
	8	Um 20:57 habe ich in einem Online-Shop nach Möbeln gesucht. Da kam mir die Idee, dass ich auch auf anderen Online-Shops nach diesen Möbeln suchen könnte. Die Suche war leider nicht erfolgreich.	At 8:57 pm; I was looking for furniture in an online shop and I had the idea to look for those pieces of furniture in other shops as well. Unfortunately my search was unsuccessful.	idea to visit multiple online shops; search unsuccessful	Exploratory, Alternative Ideas, Cat:Seeing a Need	Idea Types
	9	Am Freitagmorgen um 10:00 wollten wir auf der Arbeit eine Komponente umschreiben. Da kam mir natürlich die ein oder andere Idee, wie wir das angehen könnten.	On Friday morning at 10 am, we wanted to rewrite a component. naturally, I came up with some ideas in the process of doing so.	ideas on how to rewrite component	Topic Focused, Cat:Work	Idea Types

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	10	Freitagnachmittag um 15:00 kamen mir einige Idee dazu, wie ich ein Problem lösen könnte, das mir in einem Fortbildungskurs gestellt wurde.	Friday afternoon at 3 pm I had some ideas on how to solve a problem from a training course.	ideas on how to solve training course problem	Topic Focused, Cat:work	Idea Types
	11	Samstagmorgen habe ich Terraria [ein Computerspiel] gespielt und hatte Lust, etwas zu bauen. Dementsprechend kamen mir ein paar Ideen dazu, was ich für bauen könnte. Am Sonntag nochmal exakt dasselbe.	On Saturday morning I played Terraria [a video game] and wanted to build something. Therefore, I had several ideas on what to build. The same was true for Sunday.	ideas on what to build in video game	Exploratory, Topic Focused, Cat:Hobbies	Idea Types
	12	Am Montag setzten wir das Refactoring von Freitag fort und mir kamen diverse Ideen dazu, wie man Variablen in den Testfällen aufteilen könnte.	On Monday we continued the refactoring we started Friday and I had several ideas on how to distribute variables among the test cases.	ideas on how to distribute variables among test cases	Topic Focused, Cat:Work	Idea Types
	13	Montagabend kamen mir wieder Bauideen für Terraria. Die habe ich auch prompt umgesetzt.	On monday evening I hade build ideas for Terraria again, which I promply implemented.	ideas on what to build in video game	Exploratory, Topic Focused, Cat:Hobbies	Idea Types
	14	Am Dienstag haben wir im Team diskutiert, wie wir das Upgrade einer Library umsetzen, das vom Kunden eingebracht wurde. Dabei entstanden auch einige Idee.	On Tuesday, our team discussed how to implement a library upgrade which the customer proposed. Some good ideas came from this.	ideas during team meeting	With People, Topic Focused	Creativity Factors, Idea Types

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Dienstagabend habe ich versucht, meine eigene App zu veröffentlichen und bin dabei auf diverse Problem gestoßen. Ich hatte aber auch Ideen, wie man diese Problem lösen könnte.	On Tuesday evening, I tried to publish my selfmade app and in doing so encountered several problems. But I also came up with ideas on how to solve these problems.	ideas on how to solve problems with app publication	Topic Focused, Cat:Hobbies	Idea Types
	16	Ich glaube tatsächlich schon, dass ich den Großteil meiner Ideen direkt umgesetzt habe, sowohl im privaten, als auch im geschäftlichen Bereich.	I do in fact believe that I directly implemented most ideas I had. This is true for my private ideas as well as work based ideas.	directly implemented most private and work based ideas	High Will	Idea Commitment
	17	Es war auch meist so, dass ich zum Beispiel das Spiel gestartet habe und mir dann erst einmal überlegt habe, was ich denn heute bauen könnte.	It was usually the case that I for example started a game and only afterwards thought about what to build today.	coming up with ideas for builds only after starting game	Topic Focused	Idea Types
	18	Ich hatte also nicht die Situation, dass ich mir überlege, was ich in zwei Monaten tun könnte.	So, I didn't really run into a situation where I thought of something that i could do two months later.	ideas not thought out two months in advance	Roaming Thoughts, High RD	Idea Types, Idea Commitment
	19	Ich hatte natürlich oft die selben Probleme und dementsprechend auch die selben Ideen als Lösung.	Of course, I often ran into the same problems and therefore had the same ideas to solve them.	problems occure repeatedly; same solution ideas	Recurring Ideas	Idea Types
	20	Manche dieser Ideen kamen mir schon früher einmal und ich habe jetzt lediglich einen neuen Ansatz dafür gefunden.	I already had some of these ideas earlier and just came up with a new approach.	new approach to existing idea	Improving Ideas, Alternative Ideas	Idea Types
	21	Die meisten Ideen kamen mir definitiv kontextbezogen.	Most ideas definitely were context-related	most ideas context-related	Topic Focused	Idea Types

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	22	Mir ging es jetzt auch nicht so, dass ich mal abends im Wohnzimmer saß und einfach aus dem Nichts eine Idee auftauchtet.	There was never a situation where I just sat on my couch in the evening and an idea appeared out of nothing.	ideas don't appear out of nothing	New Ideas	Idea Types
	23	Oftmals kamen mir Ideen in Meetings, wenn eine Person etwas vorgestellt hat und dann zusammen gebrainstormt wurde.	Oftentimes, I had ideas during meetings when one person introduced something and we brainstormed together.	ideas from brainstorming during meetings	With People, Exploratory	Creativity Factors, Idea Types
	24	Wenn ich eine Idee weiter ausarbeiten möchte, laufe ich auch gerne mal ein wenig in meinem Zimmer auf und ab.	I like walking up and down my room to further an existing idea.	walking up and down room to further existing idea	Light Activity, Improving Ideas	Creativity Factors, Idea Types
	25	Es hilft mir auch, wenn ich nicht nur auf den Bildschirm schaue. Dann bin ich nicht so fokussiert auf das, was dort steht.	It also helps when I don't just look at a screen all the time. That way I'm not to focussed on what is printed there.	looking away from screen to avoid focusing on its content	Inactive	Creativity Factors
	26	Diese Woche hatten andere Menschen keinen riesigen Einfluss auf meine Kreativität. Allerdings war auch keine Situation dabei, in der ich allzuviel Kreativität gebraucht hätte.	This week, other people didn't have a huge influence on my creativity. But there weren't really any situations when I needed to be particularly creative.	no huge influence on creativity by other people; little need to be creative	With People	Creativity Factors

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	27	Beim Spielen ist mir aufgefallen, dass ich meine Ideen alleine doch noch etwas mehr ausschmücke. Ich habe das Gefühl, dass es andere Leute nerven könnte, wenn ich, beim gemeinsamen Spielen, meine Idee zu sehr ausbaue. Die andere Person könnte sonst denken: "Wieso macht er das? Es ist doch unnötig, dass wir hier noch so viel Zeit verschwenden. Ich würde gerne noch etwas anderes machen."	While gaming, I noticed that I tend to add more details into my ideas' implementation when I'm alone. I feel like other people might get annoyed when I put too much work into my ideas while playing with others. The other person might think: "Why is he doing this? It's unnecessary to put so much detail into this. I want to do something more."	more details when alone; other people might get annoyed by time spent on details	Alone	Creativity Factors
	28	Ob ich alleine bin, oder unter Leuten hat für mich keinen Unterschied gemacht.	To me, it didn't really matter whether I'm alone or with people.	no difference whether alone or with people	Alone, With People	Creativity Factors
	29	Wenn ich am entspannen bin, bin ich nicht so fokussiert auf eine Sache und dann auch kreativer.	When I'm relaxing, I don't focus too much on one thing and therefore am more creative.	more creative when not focusing on one thing	Topic Focused	Idea Types
	30	Letzte Woche habe ich meine Kreativität ja noch als eher mittelmäßig eingestuft. Inzwischen würde ich mich aber auf einer Skala von 1 bis 10 bei einer 7 sehen.	Last week I rated my creativity pretty average. Now, I would rate it a 7 out of 10.	improved image of own creativity	-	-

Table B.4: Second Interview 04 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	31	Ich glaube in manchen Bereichen des Lebens bin ich nicht so kreativ, in anderen dafür sehr. Das hängt immer davon ab, was man macht.	I think, I'm less creative in some areas of life and more in others. It really depends on what I'm doing.	creativity depends of area of life	-	-
	32	Ich glaube, das hängt sehr stark davon ab, wie tief man in einem Thema drinnen ist. Je mehr man sich auskennt, desto kreativer kann man sein.	I believe that depends a lot on how deep of an understanding you have of a topic. The more you know, the more creative you can be.	creativity depends on field knowledge	High Ability	Idea Commitment

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
05	1	Definition hat sich nicht verändert.	Defintion didn't change.	-	-	-
	2	Eine Idee, die ich hatte war eine Möglichkeit, verschiedene Radkarten zu einer Karte zu kombinieren.	One idea I had was combining multiple bike maps into one.	idea about bike maps	Improving Ideas, Cat:Hobbies	Idea Types
	3	Quasi alle Ideen, die ich hatte, sind zu Hause entstanden. Sie entstehen meist, weil ich in einem gewissen Bereich ein Bedürfnis habe, das nicht gedeckt wird.	basically every idea I had originated at home.	ideas mostly at home	-	-
	4	Ab und zu lese ich auch über ein Thema und überlege mir dann mehr dazu.	From time to time I read about a topic and think some ideas about it.	ideas about read topics	Topic Focused	Idea Types
	5	Eine weitere Idee kam mir zum Thema Lernspiele. Ich habe in einem alten Job einmal Lernspiele entwickelt und bin sehr enttäuscht, was der Markt hier bietet.	Another idea occured in relation to the topic of educational games. I developed educational games at my old job and am very disappointed in what the market has to offer in that regard.	idea about educational games	Need-Oriented, Cat:Seeing a Need, High Ability	Idea Commitement
	6	Diese Idee kommt mir immer dann in den Sinn, wenn ich mich wieder mit Leuten aus dem Bildungswesen unterhalte, die hier auch starken Bedarf sehen.	This idea appears every time I talk to people from the education sector. They see a large demand as well.	idea from talking to people working in the educational sector	With People	Selective

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	7	Ich glaube, der Grund, warum hier niemand sich einbringt ist, weil in diesem Markt einfach kein Geld zu machen ist.	I believe the reason why no one is working on this is that there is too little money to earn there.	too little money to earn	Low Will, High RD	Idea Commitement
	8	Eine weitere Idee dreht sich um Daten aus dem echten Leben. Ich habe einen alten Strom- und Gaszähler und habe mich gefragt, ob es möglich wäre, diesen automatisiert mit einer Kamera auszulesen.	Another idea is about real life date. I own a very old power and gas meter and I thought about reading it automatically via a camera.	idea about reading of real life data	Exploratory, Cat: Seeing a Need	Idea Types
	9	Eine weitere Idee, die mir auf dem Fahrrad kam ist, dass ich gerne ein Fernlicht für mein Fahrrad hätte.	Another idea I had while cycling was, that I would love to have a high beam light for my bicycle.	idea about high beam light for bicycles	Cat:Hobbies	Idea Types
	10	Als ich mit den Öffentlichen unterwegs war, kam mir die Idee, dass man die Live-Daten der Anzeigetafeln kombinieren und interpolieren könnte, um sozusagen eine Live-Abbildung des Verkehrsnetzes zu haben.	When I was using public transportation, I had the idea to combine and interpolate all the live data from displays to get a live status map of the entire public transport system.	idea about live map of public transport	New Ideas	Idea Types

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	11	Eine weitere Idee kam mir, da ich gerade Einblicke in medizinische Software bekommen habe. Mir ist aufgefallen, dass die meiste administrative Software in diesem Bereich sehr schlecht ist und da kamen mir die Idee, wie man das ändern könnte.	Another idea occurred to me because I currently have some insight into software from the medical field. I noticed that most administrative software inthat field is bad and I had an idea on how to change that.	idea about administrative software in medical field	Cat:Seeing a Need	Selective
	12	Da habe ich mir dann auch Finanzierungskonzepte überlegt und wie man das ganze den Arztpraxen schmackhaft machen könnte.	For that idea I also thought out financing concpets and how to market the concept to medical practices.	idea includes financing and marketing	High Will, High RD	Idea Commitement
	13	Eine weitere Idee, die ich angesichts der steigenden Mietpreise schon öfters hatte ist, wie man eine moralische Vermietungsfirma aufziehen könnte.	Due to steadily rising cost of rent, I had another idea. I revolves around how to create an ethical rent firm.	idea about ethical rent firm	Need-Oriented, Cat:Seeing a Need	Idea Types
	14	Ich habe immer wieder da Bedürfnis, bestimmte Ideen in meinem Leben zu dokumentieren und dazu habe ich mir überlegt, wie man das umsetzen könnte. Das ist sozusagen das Thema Knowledge-Management, was ich recht interessant finde.	From time to time I feel the need to document ideas in my life and I thought about how to implement a solution for this problem. Basically that's the topic of knowledge management. I find that really interesting.	idea about knowledge management; interesting topic	High PI, Recurring Ideas	Creativity Factors, Idea Types

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Ich habe mir dieses Jahr eine Klimmzugstange zugelegt und da kam mir die Idee, dass eine Stoppuhr praktisch wäre, die man mit den Füßen bedienen kann.	This year I acquired a pull-up rack and I had the idea that it would be nice to have a stop watch you can operate with your feet.	idea about foot-operated stop watch	Need-Oriented, Cat:Hobbies	Idea Types
	16	Damit mir Ideen kommen, muss eine gewisse Ruhe da sein. Wenn ich beschäftigt bin, kommen mir keine Ideen.	There has to be a certain calm for me to come up with ideas. I don't come up with ideas when I'm busy.	needs calm to come up with ideas; no ideas when busy	Relaxing	Creativity Factors
	17	Das geht mir natürlich auch beim Fahrradfahren so, aber grundsätzlich auch immer, wenn ich alleine bin.	Naturally that's the case when I'm cycling. But also, when i'm alone.	creative when cycling and/or alone	Alone, Light Activity	Creativity Factors
	18	Auch, wenn ich mich mit der Thematik beschäftige, kommen mir dann durchaus Ideen, die ich dann in Skizzen festhalte.	When I engage in a topic I also get ideas that I note down as sketches.	ideas when engaging in topic	Topic Focused	Idea Types
	19	Aber grundsätzlich kostet es natürlich unglaublich viel Aufwand, das dann tatsächlich auch umzusetzen.	Although it inherently takes a lot of effort to actually implement something.	implementation takes lots of effort	High RD	Idea Commitement
	20	Ich glaube, ich bin schlecht darin, wirtschaftlich rentable Ideen zu generieren. Ich glaube, da sind andere besser darin.	I think I'm bad at generating financially sustainable ideas. Others are probably better at doing this.	bad at creating financially sustainable ideas	High RD, Low Ability	Idea Commitement

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	21	Mir ist auch aufgefallen, dass sich die meisten Ideen doch stark um mein eigenes Leben herum drehen. Da war jetzt nichts exotisches dabei.	I also noticed that most of my ideas revolve heavily around my own life. There wer no really exotic ideas.	ideas revolve around own life	High PI	Creativity Factors
	22	Weiterhin kamen wirklich neuartige Ideen doch eher selten vor.	Aditionally, truly novel ideas were sparse.	not many truly novel ideas	New Ideas	Idea Types
	23	Und drittens handelt es sich doch bei vielen Ideen um digitale Produkte.	And thirdly, many ideas were digital products.	many ideas digital products	-	-
	24	Es war sehr oft so, dass ich jetzt gerade ein Problem habe und die Idee dann eine Lösung dazu darstellt.	Oftentimes I had a problem at that moment and the idea represented the solution to this problem.	ideas very problem oriented	Need-Oriented	Idea Types
	25	Viele meiner Ideen sind kapitalistisch nicht wirklich verwertbar, da sie schon sehr auf meine persönlichen Bedürfnisse zugeschnitten sind.	Many of my ideas can't be utilized towards capitalistic gains because they are tightly fitted towards my own needs.	ideas tightly fitted towards own needs; no capitalistic gain	High PI	Creativity Factors
	26	Ich habe dann auch oft das Problem, dass der Aufwand, den ich in eine Idee stecken muss, um sie zu verwirklichen extrem hoch wäre. Einige Idee habe ich schon angefangen, aber der Aufwand war dann einfach zu hoch.	I often have the problem that I would have to put in extreme amounts of work to realize an idea. Some of those ideas I already started implementing. But they just take too much effort.	high effort to realize idea	Low Will, High RD	Idea Commitement

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	27	Man muss da schon extrem viele Punkte beachten und das teilweise auch in Themengebieten, von denen man keine Ahnung hat.	You have to consider a lot and partially in fields you don't know anything about.	consider a lot for implementing ideas; requires knowledge in several fields	High Ability	Idea Commitement
	28	Viele Ideen scheitern auch an dem Trieb, der nach der Arbeit noch da ist.	Many ideas also fail at my lack of drive after work.	not enough drive after work	Low Will	Idea Commitement
	29	Um kreativ zu sein, muss ich an den Ort gewöhnt sein, es muss ruhig sein und ich muss eine gewisse Tiefenentspannung haben.	To be creative, I have to be used to a location, it has to be quiet and there has to be some form of deep relaxation.	creativity requires familiar, quiet location and deep relaxation	Alone, Relaxing, Rigid	Creativity Factors
	30	Wenn ich allerdings müde bin, dann passiert auch nichts.	Also, nothing's happening whn I'm tired	not creative when tired	Inactive	Creativity Factors
	31	Insgesamt ist das also eher beim spazieren gehen oder zu Hause.	In summary that's more likely when going for a walk or being at home.	creative when going for a walk being or at home	Relaxing, Light Activity	Creativity Factors
	32	Menschen tendieren schnell dazu, zu sagen: "Ich bin nicht kreativ. Das sind doch nur Künstler." und das ist dann sehr schade.	People tend to quickly state: "I'm not creative. Only artists are creative." und that's very sad.	I'm not creative; artists are creative	Cat:Art	Idea Types
	33	Solche Menschen sind dann auch sehr schlechte Austauschpartner.	Such people are bad creative counterparts.	bad creative counterparts	With People	Creativity Factors

Table B.5: Second Interview 05 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	34	Ich bin eher kreativ, wenn ich mich entspanne. Spazieren und Radfahren sind da Ausnahmen, aber beim Klettern zum Beispiel geht das gar nicht.	I'm more creative when I'm relaxing. Biking and going for a walk are exceptions. But I can't be creative when I'm climbing for example.	more creative when relaxing; creative when biking and going for walk; not creative when climbing	Light Activity, Demanding	Creativity Factors
	35	Ich würde mich schon zu den kreativeren Menschen zählen.	I would count myself amongst the more creative people.	amongst more creative people	-	-

Table B.6: Second Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
06	1	Definition hat sich nicht verändert.	Defintion hasn't changed.	-	-	-
	2	Der Großteil meiner Ideen waren tatsächlich Zeichenideen. Das heißt, ich habe etwas gesehen und dachte mir, das könnte ich zeichnen.	The majority of my ideas were in fact drawing ideas. Meaning that I saw something and decided I wanted to draw it.	wanted to draw	Cat:Art, Cat:Hobbies	Idea Types
	3	Der Rest waren größtenteils private oder Arbeitsentscheidungen, bei denen mir neue Ansätze gekommen sind.	Most of the rest were private or workplace decisions to which I came up with new approaches.	came up with new approaches	New ideas, Alternative Ideas	Idea Types
	4	Diese Ansätze kamen dann entweder aus Podcasts oder aus dem Gespräch mit anderen Leuten.	These approaches originated either from podcasts or from talking to other people.	podcasts or talking to people fosters ideas	External, With People, Alone	Creativity Factors
	5	Einmal habe ich auf Instagram ein Bild von einem Baum gesehen und hatte mir dann überlegt, auch einmal so etwas zu zeichnen.	One time, I saw a picture of a tree on Instagram and decided to draw something like that as well.	idea to draw something; inspred by picture on instagram	External, Cat:Art, Cat:Hobbies	Creativity Factors, Idea Types
	6	Als ich dann später durch die Natur gelaufen bin, kam mir bei jedem dritten Baum die Idee, dass ich den doch zeichnen könnte.	When I took a stroll through nature later, at every third tree, I got the idea to draw it.	idea to draw tree while on a walk	Light Activity, External, Cat:Hobbies, Cat:Art	Creativity Factors, Idea Types

Table B.6: Second Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	7	Eine weitere Zeichenidee entstand, als ich in eine witzige Situation mit einem Freund geriet und mir dachte, dass ich diese Situation gerne zeichnen würde. Daraus entstand dann unter der der Dusche die Idee, insgesamt mehr Situationen abstrakt darzustellen.	Another drawing idea originated when I got into a funny situation with a friend. I got the idea to draw said situation. While taking a shower, this idea developed into the idea to draw more situations in an abstract way.	idea to draw situations; idea sparked other idea	With people, Improving Ideas, Exploratory	Creativity Factors, Idea Types
	8	Eine Idee hatte ich auch, als ich einfach auf dem Sofa saß. Die kann ich dir aber grade nicht mehr sagen.	I had another idea while sitting on the couch. Unfortunately I can't tell you what it was.	idea while relaxing	Relaxing	Creativity Factors
	9	Ein bis zwei dieser Zeichenideen habe ich bereits als Skizzen umgesetzt. Beim Rest hängt es hauptsächlich am Aufwand. ich habe allerdings schon Fotos von Bäumen gemacht, die ich dann irgendwann zeichnen will.	I already implemented one or two of the drawing ideas in the form of sketches. The rest is hindered mainly bey the effort required. I did however already take some photos of trees I want t draw.	required effort hinders idea implementation	Low Will	Idea Commitment
	10	Außerdem sind die ersten Zeichnungen ja dann nur zur Übung. Da kann man sich noch nicht richtig verwirklichen. Das ist dann natürlich auch nicht so motivierend.	Additionally, the first drawings are just for practice. There is no real potential for self realization. That's obviously not very motivating.	practice work lacks potential for self realization; lack of motivation	Low Will, Low Ability	Idea Commitment
	11	Die Ideen waren insgesamt alle kreativ oder die Grundlage für etwas kreatives.	All of the ideas were creative or the foundation for something creative.	ideas creative	-	-

Table B.6: Second Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	12	Außerdem kamen mir Ideen vor allem beim spazieren gehen, oder im direkten oder indirekten Austausch. Das heißt, in Gesprächen oder durch Podcasts.	Ideas usually originated from going for a walk or from direct or indirect exchange. Meaning during conversations or podcasts.	ideas from walks, conversations or podcasts	With People, Light Activity, External	Creativity Factors
	13	Ich habe kreative Ideen eher abends. Das ergibt auch Sinn, weil ich zu dieser Zeit eher an den Orten bin, an denen mir Ideen kommen. Das ist, wie gesagt, draußen beim Spazieren, oder drinnen auf dem Sofa.	i have most of my creative ideas during the evening. Which makes sense considering that's the time when I'm usually at the places where I'm creative. As already mentioned, those are outside, while going for a walk or inside, sitting on my couch.	creative ideas in the evening, on walks and on the couch	Light Activity, Relaxing	Creativity Factors
	14	Andere Leute geben mir kreativen Input für meine Ideen. Außerdem können sie auch Teil dessen sein, was ich mit den Ideen darstellen möchte.	other people give me creative input for my ideas. They can also be part of what I want to represent with the idea.	other people give creative input; people can be part of idea	With People, External	Creativity Factors
	15	Alleine oder unter Leuten macht für mich keinen Unterschied.	Whether i'm being alone or with people has no real impact on my creativity.	alone vs being with people no impact on creativity	Alone, With People	Creativity Factors
	16	Beim spazieren bin ich kreativ, ansonsten bei Aktivitäten eher nicht.	I'm creative while going for a walk. That's not the case for other activities.	creative while on a walk; not creative while active	Light Activity, Demanding	Creativity Factors

Table B.6: Second Interview 06 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	17	Wenn ich mich konzentrieren muss, bin ich nicht kreativ, wenn ich auf Leerlauf stellen kann, dann schon eher.	I'm not creative while I have to concentrate. I however am more creative, when my mind can roam freely.	not creative while concentrating; creative while mind roaming	Occupied, Roaming Thoughts	Creativity Factors, Idea Types
	18	In mir ist Kreativität schon vorhanden, aber es ist jetzt keine sprudelnde Quelle, die dauerhaft neue Ideen produziert.	I think there exists some creativity inside of me. But it isn't some fountain of neverending ideas.	some creativity; not some fountain of neverending ideas	-	-
	19	Ich habe grade auch eher Routinearbeiten, was dafür sorgt, dass ich derzeit weniger über Dinge nachdenken muss.	At the moment, most of my work is routine work. This causes me to spend less time thinking about things.	less time thinking due to routine work	Inactive	Creativity Factors

Table B.7: Second Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
07	1	Definition unverändert.	Defintion unchanged.	-	-	-
	2	Viele Ideen haben sich in Gesprächen entwickelt.	Many ideas formed during conversations.	ideas formed during conversations	With People	Creativity Factors
	3	Es gab auch viele Momente, da habe ich mich mit meinem Tag beschäftigt. Das kann zum Beispiel beim Zähne putzen sein.	There were many moments when I recap my day. This can be for example while brushing my teeth.	recap day	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	4	Da kam mir die Idee, dass ich für die Lösung eines komplexeren Problems, einen weiteren Kundenpartner einbinden könnte.	One idea I had was to include one more customer into solving a complex problem.	idea to include customer in solving problem	Roaming Thoughts, Cat:Work	Idea Types
	5	Oder es kamen mir auch Ideen im Stil von: "Ich sollte bei Projekt X eine weitere User-Story für Y hinzufügen."	Or I had ideas in the form of "I should add user story Y to project X"	idea about adding user story	Roaming thoughts, Cat:Work	Idea Types
	6	Es gab aber auch andere Momente, in denen ich mich beispielsweise in der Vorbereitung eines Termins befand. Dabei habe ich gezielt nach Ideen für das konkrete Problem des Termins recherchiert.	There were other moments as well. For example when I was preparing for a meeting. While doing so, I focused on finding ideas towards the concrete problem of the meeting	looking for ideas towards concrete problem	Topic Focused, Cat:Work	Idea Types

Table B.7: Second Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	7	Dieses gezielte Nachdenken kam häufiger vor. Zum Beispiel, als ich eine Präsentation für einen Kunden aufgearbeitet habe. Dabei kamen mir Ideen zu Punkten, die ich aufschreiben wollte.	This focused thinking happend a lot. For example when I prepared a presentation for a customer. In doing so, I got ideas relating to the points I wanted to write down.	ideas relating to points in prepared presentation	Topic Focused, Cat:Work	Idea Types
	8	Ein anderes Beispiel war, als ich mir das Video zum Geschäftsstellenmeeting angesehen habe. Ich fand die aktuelle Lösung, wie die "Balls of Fame" im virtuellen Meeting behandelt werden, nicht so gut. Später, beim Spaziergang, kam ich dann bei einem Bauernhof vorbei, der Milchplaketten aushängen hatte. Dies beiden Momente habe ich dann mental verknüpft und daraus entstand eine Idee für "Ball of Fame Plaketten".	Another example was when I watched the video of the Geschäftsstellenmeeting. I disliked the current solution of how "Balls of Fame" are handled in virtual meetings. Later, when I went for a walk, I passed a farm. In front of the form there were some milk related badges. I connected both of these moments mentally and got the idea for "Ball of Fame badges".	idea for "Ball of Fame badges"	External, Light Activity, Composite Ideas, Cat:Work	Creativity Factors, Idea Types
	9	Auch bei einem Spaziergang, habe ich über die Ereignisse der letzten Wochen nachgedacht und mir kam die Idee, dass ich [den Standortchef] noch einmal zu einem bestimmten Thema ansprechen wollte.	On another walk I recapped the events of last week and had the idea to talk to [the site manager] about a specific topic	idea to talk to site manger about topic	Roaming Thoughts, Cat:Work	Selective

Table B.7: Second Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	10	Ein anderes mal, kam mir morgens, beim Lesen meiner E-Mails die Idee, dass ich noch eine Wikiseite zu einem bestimmten Thema anlegen wollte.	Another time I had an idea while checking my mails in the morning. The idea was to create a wiki page about a specific topic.	idea to create wiki page	Light Thinking, Cat:Work	Creativity Factors, Idea Types
	11	Außerdem kamen mir innerhalb eines Kundengesprächs neue Ideen, als mir dieser seine Kritik erzählte. Darauf basierend haben wir dann das ganze Konzept noch einmal überarbeitet.	I also had new ideas when a customer told me their criticism during a meeting. Based on this, we reworked the entire concept.	ideas about concept; customer criticism	With People, External, Alternative Ideas, Cat:Work	Creativity Factors, Idea Types
	12	Insgesamt lassen sich meine Ideen also in drei Kategorien einteilen: Das freie Denken, die gezielte Vorbereitung und das gemeinsame Brainstormen.	In summary, my ideas can be split into three different categories: The free thinking, the focused preparation and brainstorming together.	freethinking ideas, focused preparation ideas, brainstorming ideas	With People, Roaming thoughts, Topic Focused	Creativity Factors, Idea Types
	13	Das freie Denken passierte bei mir eher beim Zähne putzen und Spazierengehen.	The free thinking usually happend when I brushed my teeth or went for a walk.	free thinking ideas while brushing teeth or going for walk	Light Activity, Roaming Thoughts	Creativity Factors, Idea Types
	14	In den Ad-Hoc Situationen habe ich die Ideen sowieso direkt umgesetzt. Wenn ich Ideen zusammen mit meinem Gesprächspartner entwickelt habe, wurden diese zumindest einemal festgehalten und später weiterverfolgt.	In ad-hoc situations, I obviously implemented the ideas immediately. When I developed ideas together with others they were at the very least noted down and followed through at a later time.	ad-hoc ideas and brainstorming ideas implemented	With Others, High Will, Low RD	Creativity Factors, Idea Commitment

Table B.7: Second Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	15	Auch, wenn mir zum Beispiel einfiel, dass ich ein Konzept aufschreiben wollte, dann habe ich das natürlich sofort erledigt.	Also, when I remembered that I wanted to write down some concept, I obviously did that immediately after.	ideas about concepts written down immediately	High Ability, Low RD	Idea Commitment
	16	Ich würde also schon sagen, dass ich viel davon bereits umgesetzt habe.	In summary, I think I already implemented a lot of my ideas.	a lot of ideas already implemented	-	-
	17	Wenn mein Kopf frei denken kann und nicht mit Reizen überflutet wird, kommen mir schon viele unterschiedliche Ideen.	When my head can think freely and is not flooded by stimuli, then I get a lot of different ideas.	think freely; not flooded by stimuli	Roaming thoughts, External	Creativity Factors
	18	Ich glaube auch, dass die äußeren Reize beim Spazierengehen dazu beitragen, das man mehr Ideen bekommt.	I also do believe that the external stimuli I get while going for a walk, contribute to me having more ideas.	external stimuli on walk	External, Light Activity	Creativity Factors
	19	Bei einer Rechereche verknüpfe ich neue Informationen mit bereits vorhandenem Wissen. Aus diesem neuen Knoten entsteht dann oft zu weiteren Ableitungen.	When I do research on a topic, I connect new information with existing one. From this new nodes, I often get further derivations.	connecting new knowledge leads to further derivations	Internal, Improving Ideas, Composite Ideas	Creativity Factors, Idea Types
	20	Der Dialog verhält sich da sehr ähnlich. Das ist dann quasi schon brainstorming. Quasi ein methodisches Herauskitzlen von neuen Impulsen.	A dialouge is quite similar. It's basically brainstorming. Basically a methodical extraction of new impulses.	dialouge is basically brainstorming; extraction of new impulses	With People, External	Creativity Factors
	21	Keine Zeit, kein Ort	no time, no place	no time, no place	Flexible	Creativity Factors

Table B.7: Second Interview 07 Coding

Participant #	Line #	Interview Statement	Translation	Open coding	Axial coding	Selective Coding
	22	Eine Idee führt zur nächsten, egal ob die von mir kommt, oder von anderen.	One idea triggers the next one. it doesn't matter whether the idea originates from me or someone else.	ideas trigger each other	Internal, External, Improving ideas, Composite Ideas	Creativity Factors, Idea Types
	23	Neue Ideen bekomme ich sowohl unter Leuten als auch alleine	I get new ideas when I'm with people as well as when I'm alone	being alone or with people doesn't matter	Alone, With People	Creativity Factors
	24	Ich bekomme mehr Ideen, wenn ich aktiv bin. allerdings mehr im Sinne von mein Kopf ist aktiv.	I get more ideas while being active. Bt more in a sense of my head is active.	more ideas when head is active	Light Thinking, Occupied	Creativity Factors
	25	Wenn ich auf dem Sofa rumliege und einen Film anschaue, glaube ich nicht, dass ich besonders kreativ bin.	I don't think, I'm particularly creative while laying on the couch and watching a movie.	not creative while watching movie	Inactive	Creativity Factors
	26	Wenn ich aber spazieren gehe oder unter der Dusche stehe, kann mein Kopf entspannen und aktiv werden. Wenn mein Kopf also Leerlauf hat, dann wird er quasi aktiv, um über meinen Tag nachzudenken.	But when I'm going for a walk or taking a shower, my head can relax and become active. So basically, my head get's active to recap my day when it's idling.	more ideas when going for walk or taking shower; head becomes active when idling	Inactive, Roaming Thoughts	Creativity Factors, Idea Types
	27	Manchmal halte ich mich für durchaus kreativ.	Sometimes I do think that I'm creative.	sometimes creative	-	-

Declaration

I hereby declare that the work presented in this thesis is entirely my own and that I did not use any other sources and references than the listed ones. I have marked all direct or indirect statements from other sources contained therein as quotations. Neither this work nor significant parts of it were part of another examination procedure. I have not published this work in whole or in part before. The electronic copy is consistent with all submitted copies.

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place, date, signature