



AALBORG UNIVERSITET

MSC. IN INNOVATION, KNOWLEDGE
AND ENTREPRENEURIAL DYNAMICS



THE RELATIONSHIP BETWEEN CREATIVITY AND ACTIVATION AN EXPLORATIVE STUDY

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1 ABSTRACT

In literature regarding training of individual creativity, two separated focuses were found; *creativity training* and *activation*. Creativity training considers the impact of training on an individual's creativity, and activation describes how a number of actions can temporarily increase activation in the individual. As these areas are not considered in context to each other, certain tendencies in the literature about the results of creativity training should be reconsidered, especially regarding activation occurring during creativity training, and how this impact the long-term effects of the gained increase in creativity from training.

This explorative study performs a qualitative data-process involving eight interviews with individuals haven taken a creative training course, and through a critical realistic methodology finds that activation plays a role on creativity level. Through an analysis of self-defined data from the interviewees, it is found that there seems to exist a positive effect from creativity training, but whether this effect is either long-term increasing or decreasing, depends on how the individuals tacitly utilize activation in their daily live.

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2 INTRO

Organizational innovation is becoming buzzword area for most organizations, and numerous articles are written about how to transform organizations and companies towards an innovational mindset. With creativity being considered an important aspect of innovation, more and more knowledge regarding what companies can do, to ensure creativity is researched, from organizational structures, R&D development, innovation clusters and transformational leadership.

But creativity does not start with the company, the leader or the location; it starts with the individual. And compared to the buzz around innovation, the area of individual creativity have been overlooked; when trying to understand individual creativity, and especially how companies, organizations or the individual self can influence this creativity, the amount of knowledge is limited.

The literature review conducted in this work, shows that the research have hardly moved past proven whether creativity training works, something which have been well known for decades, and research into *how* the training works, and which structures governs the training seems almost entirely nonexistent.

This work aims towards increasing this knowledge, and hopes to push the research of individual creativity training into focus. Innovation starts with the individual, and with the ability to increase individual creativity, comes the ability to increase innovation in all levels of life.

3 OVERVIEW

This work starts in chapter 4 “Philosophy of Science” by explaining its philosophical base as critical realistic, and considering how this will impact the future work; mainly in relation to its search for structures. In chapter 5 it considers possible biases, and in chapter 6 the relationship between innovation and creativity is described.

In chapter 7 “Literature Review Methodology”, the methods, results and meta-data regarding the literature used in this work is defined. This leads to chapter 8, which defines different terminology used, partly throughout the literature, but mostly in this work. The literature is then considered in chapter 9 “Literature Overview”, which describes the main tendencies found within the literature. In these tendencies a discrepancy is found, as there exists two areas of the literature, creativity training and activation, where the findings on activation seems to impact the findings of creativity training, but is not considered in this area. This is outlined in chapter 10 “Training vs Activation”, and culminates in the Problem Formulation;

What role does activation play, on long-term creativity after creativity training, and how does this effect the current method of establishing the success of creativity training?

This starts the second aspect of this work, aimed towards answering the problem formulation. First, relevant data which could impact the future research, is considered in chapter 12. In chapter 13 “Research Method”, relevant methods, including the chosen data collection method of interviews is described and considered. In chapter 14 the underlying data of the interviews is presented, and in chapter 15 the interviews is analyzed and discussed, with the purpose of suggesting possible structures. Mainly the suspicion that there exists a relationship between activation and creativity levels are supported, but other interesting possible structures are also found. The findings are presented in chapter 16 “Conclusion”.

Finally, chapter 17 describes future research suggestions and chapter 18 discuss limitations of this work.

4 PHILOSOPHY OF SCIENCE

To ensure that the following work lives up to the general expectations of academic research, and to ensure that the reader understands the underlying assumptions drawn by the author, the philosophy of science underlying this work will briefly be considered.

This work is done from a point of critical realism, a philosophy developed by Roy Bhaskar. Critical realism states that reality exists in three layers; the real, the actual and the empirical (Archer, Bhaskar, Collier, Lawson, & Norrie, 2013). The real refers to generative mechanisms which are non-dependent of human observation or interference; these are the patterns that govern our reality. The actual refers to the events taking place, and the empirical refers to our perception of the events and the real.

Margaret Archer further developed on this theory, by focusing on the concept of structures (Archer, Bhaskar, Collier, Lawson, & Norrie, 2013). In this work, it is this understanding which is the underlying philosophical assumption. Archer (2013) describes these structures as the governing dynamics of every action of ours; the structures build up throughout the real, the actual and the empirical domains, to create our reality.

As a researcher, the aim is to analyse the observable structures, to understand the underlying structures. The assumption is, that the more we understand the structures which govern us, the more will we understand our world and the actions taking place in the world, across different settings and cultures.

To further explain; a structure might exist solely in a situation, but that structure is the result of an underlying structure, which might exist in a broader context. *That* structure is the result of an even more general structure, and so on. By analyzing the first structures, we will eventually be able to understand more about the underlying structures – and by analyzing these we will understand even more; and as such, we will move closer and closer to *reality*. It is generally assumed that we will never understand all of reality, but that the closer we are to reality, the greater our understanding of a subject is.

It is also this understanding of structures, which opens up for the possibility to focus on transforming or aim the structures for a specific purpose. As a critical realistic researcher, understanding the structures which governs us, is the first step to utilizing and improving on these.

It is thus the aim of this work, to understand the structures as close to reality as possible, regarding individual creativity training, in the hope of increasing the knowledge of the field, and improving the method with which we currently engage with the structures of individual creativity, creativity training and activations.

As this work is preliminary, it is not expected to define precise structures, rather, this work hopes to find tendencies which could suggest at said structures, and advocate towards future academic focus.

5 BIAS

5.1.1 In this chapter, the biases from the author is considered. As a critical realist, it is assumed that every and any observation drawn, is colored by the pre-perceived structures of the author, and of the situation. This perception is further enforced for the author, in this case, as the author have participated in the Creative Genius study, which is the ground of the data-collection (this is further discussed in the chapter Interview Method

5.1.1.1 Interview Invitation

An invitation (seen in “Appendix I: Interview Invitation”) was sent out to groups created for Creative Genius Alumni on Facebook and LinkedIn April 30, 2019. The invitation received seven answers (not including a test interview performed as part of developing the interview guide), and interviews were planned and conducted the following week.

As all interviewees were volunteer, there exist a possibility that the findings are biased, as it is possible that only individuals who actively use creativity, or individuals who have a positive outcome on creativity and the Creative Genius course might volunteer. This might result in a possible bias in the data, and thus in the research conducted based on the data, which does not match the reality. However, these limitations is accepted as a natural consequence of the means and possibilities of the research, especially considering this research’s aim of solely explore possible discrepancies in the current understanding of the structures relating to creativity, creativity training and activation of creativity.

The volunteer of participation also means that there is no control regarding the data-sample, meaning that an even distribution of time spend since participation in the course is unlikely. This might mean that only structures covering a specific and limited set of long-term effects are uncovered. Although the effect of activation theoretically does not change in relation to time-spend since creativity-course, no data persists regarding the creativity gained from creativity training (and thus, not from activation), and longer-term data might suggest at this.

5.1.1.2 Interview Guide

The interview guide can be seen in “Appendix II: Interview Guide”.

The interview guide was developed together with Soheib Ider and Martin Hansen. Soheib Ider is a Master of Innovation, Knowledge and Entrepreneurial Dynamics (the same educational background as the author), who have not taken the Creative Genius course. Martin Hansen is a master’s in international business who have taken the Creative Genius Course. These were included in the development process to ensure a general validity of the research guide, and to ensure that no relevant areas were overlooked in the collection of data.

The interview guide was developed based on a critical realistic mentality, especially referring to the critical realistic interview techniques described by Smith and Elger . The areas of focus was based on the area of research found in the literature review, and a wish to theory test. Theory testing is a method often utilized by critical realists, where experts are invited to develop on theories along with the researcher . This was practically done by describing the theories and issues regarding them, uncovered in this work, and letting interviewees respond to the findings, including aiming for further theorizing based on their expertise.

After the development of the interview guide, Soheib Ider was included, to test if the authors involvement in the field of creativity training caused areas which should be covered, but where not. A few areas were questioned and included in this work, to ensure readability and replicability from non-Creative Genius alumni.

The interview was then tested on Martin Hansen, and input from him was included in the method of interviewing to ensure the best results from the interview.

The interview had a number of focus areas. The main purpose was to gain data regarding how they perceived own creativity before, during and after the course. Secondly, it was wished to understand the individuals use of activation. By understanding these two areas, it was assumed that tendencies in the relation could be found, and thus structures governing this relationship might be discovered.

Other areas which were considered relevant, related to how the individuals perceived creativity, how they perceived the Creative Genius course, whether they had received any further training, and what relevance they put on creativity. Furthermore, as with semi-structured interviews, any areas which naturally developed, and which were found to in any way give relevant information regarding

this area, where explored.). To counter this, the research design is validated by non-biased researchers (read more about this in the chapter Research Method).

No direct research was found from a pure critical realistic mentality, regarding how to ensure the validity of the conclusions, when the research is conducted from a participatory point of view. As such, this issue was found relevant to discuss for this research, with the aim of ensuring that all parts of the methodology of this research, is conducted to ensure validity, replicability, and, from a critical realist perspective; that the structures defined as possible are based on data and not preconceptions.

This bias was believed to possibly interfere in three areas; the literature review, the data-collection process and the analysis. In all three areas, the methodological considerations countering this bias, is defined and described, and it is believed that with these areas covered, and as an explorative study, this effort was successful enough to ensure that the general findings are relevant.

6 CREATIVITY AND INNOVATION

That creativity is an important and relevant part of innovation have been common knowledge for several decades (Amabile, 1988) (Andersen, Potočnik, & Zhou, 2014). Often creativity is described as the first step of innovation, but in each and every step of the innovation process, creative input is needed to ensure the best, most suitable solutions are found:

“While the initial flash [of innovation] may require a significant creative leap, much of the rest of the process will involve hundreds of small problem-finding and -solving exercises each of which needs creative input.” (Tidd & Bessant, 2013, s. 140)

As such, creativity solely considered in regard to initiating product development, does not do the concept justice; rather creativity should be considered in relation to all aspects of organizations, and on all levels related to these aspects (Tidd & Bessant, 2013) (Andersen, Potočnik, & Zhou, 2014).

On the organizational level, research about how to create an organization which inherently promotes creativity is well documented (Tidd & Bessant, 2013). An organization today, have easy access to knowledge regarding how to form and shape the workplace on the organizational level and on the team level, to promote creative structures (Andersen, Potočnik, & Zhou, 2014). This includes considerations regarding culture (Sarooghi, Libaers, & Burkemper, 2015), leadership types (Jung, 2001) and a large number of other areas (Andersen, Potočnik, & Zhou, 2014) (Tidd & Bessant, 2013). From a critical realist perspective, an organizations level of creativity, is governed by the structures related to these areas. These structures can be transformed in new directions, as described by Archer in Critical Realism: Essential Readings (2013). Thus, by being aware of these structures, and purposely working with them, it is believed theoretically possible for organizations to become creative.

Although this work focuses on individual creativity, is it based on a believe and an assumption that the individuals creativity will play a role in all levels and areas of an organization.

7 LITERATURE REVIEW METHODOLOGY

In this chapter, the method of finding the articles used in the literature review (see “9 Literature Overview”) and the meta-data regarding these articles is presented.

7.1 METHOD TO FIND ARTICLES

To ensure that relevant articles were found to give a broad understanding of training in individual creativity, a literature review was performed. The method used to find relevant articles, is presented here.

7.1.1 Method used to sort articles in Web of Science

The database Web of Science was used, as it expands over several relevant scientific disciplines, and it is thus assumed that all relevant creativity literature would be found (or as close as is realistic, within the limitations of this study), no matter the field of study of relevant literature. Furthermore; Web of Science is a bibliographical database, giving the opportunity to create a meta understanding of the found articles and thus increase the understanding of the field as is.

In Web of Science, the following method was used to find articles, in the first week of April 2019.

31.403 publications were found in the period 2004 till now, with the search term “Creativity”. The period of time was chosen, to reduce the articles to a realistic number for this study, as per the limitations set forward (see “18 Limitations”). The period was assumed to ensure that newer researches were included in the review, but still aimed to be broad enough to ensure that no “common knowledge” articles were excluded.

Further sort was conducted by defining for only English articles, leaving 16.599 publications. The remaining articles were limited separately, to contain the following words: “Training” (969 articles), “Develop” (3.396 articles) “Evolve” (311 articles) or “Enhance” (1.768 articles). Please note that some articles have occurred in several sub-searches, as the final article count was 5.411. The hope was that these words would ensure articles regarding the development of creativity, and thus exclude any articles which discussed creativity in another context.

To limit articles, fields which were deemed entirely irrelevant were excluded¹, such as, agricultural engineering, programming and poetry, leaving 3.096 articles.

To ensure a focus on individual creativity, the word “Individual” was required to be present in the articles, leaving 689 articles.

To ensure a certain relevance of articles, articles were required to have 1 citation per year since publication (articles from 2019 needed 0 citations, articles from 2018 needed 1 citation and so forth). This left 399 articles.

7.1.2 Sorting based on articles

The 399 articles went through three stages of sorting. The first was based on the article name. This sort solely focused on excluding any articles which for one reason or another did not match the focus of this study. This meant an exclusion of articles regarding artistic creativity, cultural creativity or group-creativity. Articles which were not about creativity, which focused on non-relevant aspects of creativity, or about organizational or product creativity were also excluded. Finally, articles about transformational leadership were excluded, as this field (1) is very popular and (2) does not directly focus on development of individual creativity, even though it could be argued to play a role. However, as transformational leadership is a well-known field, which a commonly accepted understanding, it was excluded from this study, to balance the limitations with the aim of broadening the understanding of individual creativity.

¹ Leaving the following fields of study: Behavioral sciences, business, business finance, communication, economics, education, educational research, education scientific disciplines, educational special, humanities multidisciplinary, information science library science, management, multidisciplinary sciences, psychiatry, psychology, psychology applied, psychology biological, psychology clinical, psychology developmental, psychology educational, psychology experimental, psychology psychoanalysis, psychology social, social sciences interdisciplinary, sociology.

Please note that these were chosen on the knowledge of the author, and as the author does not thoroughly understand each field, some fields might have been excluded which should have been included and visa versa.

This left 86 articles, which were further sorted based on their abstracts. Here only articles which, to at least some degree, focus on increasing or improving individual creativity, were included. This left 22 articles.

Of these, one was unattainable and four turned out to not fulfill the requirements set of for the articles, leaving 16 relevant articles.

7.2 ARTICLE DATA

In this chapter, meta-data regarding the articles chosen for the literature review, and the possible implication on results, are presented. This is done in two steps; first the general data attained regarding the articles are considered, and secondly, a VOSviewer analysis is conducted.

7.2.1 General data

As the article search was purposely aimed to cover a broad area of fields, it was expected – within limits – that the articles found would cover several areas. As can be seen in Table 1 this is, to some degree, true. Of the sixteen articles, twelve of them were from some areas of psychology, four from management/business, one from education and one from multidisciplinary areas. This creates a contrast to most articles discussing creativity as a tool for managers, as these focus on management/business areas (Andersen, Potočnik, & Zhou, 2014). This lack of perspective in the field, can further be seen in the low amount of citations of the articles. According to Web of Science, the 16 articles have only been cited 325 times between them², suggesting that the field might not be fully explored or incorporated in the general creativity literature, which have a tendency towards a higher amount of citations.

It is hoped, that this paper, will create a complementary understanding of individual creativity, and thus lead to new knowledge and increase the inclusion of individual creativity training within the field.

² Own data

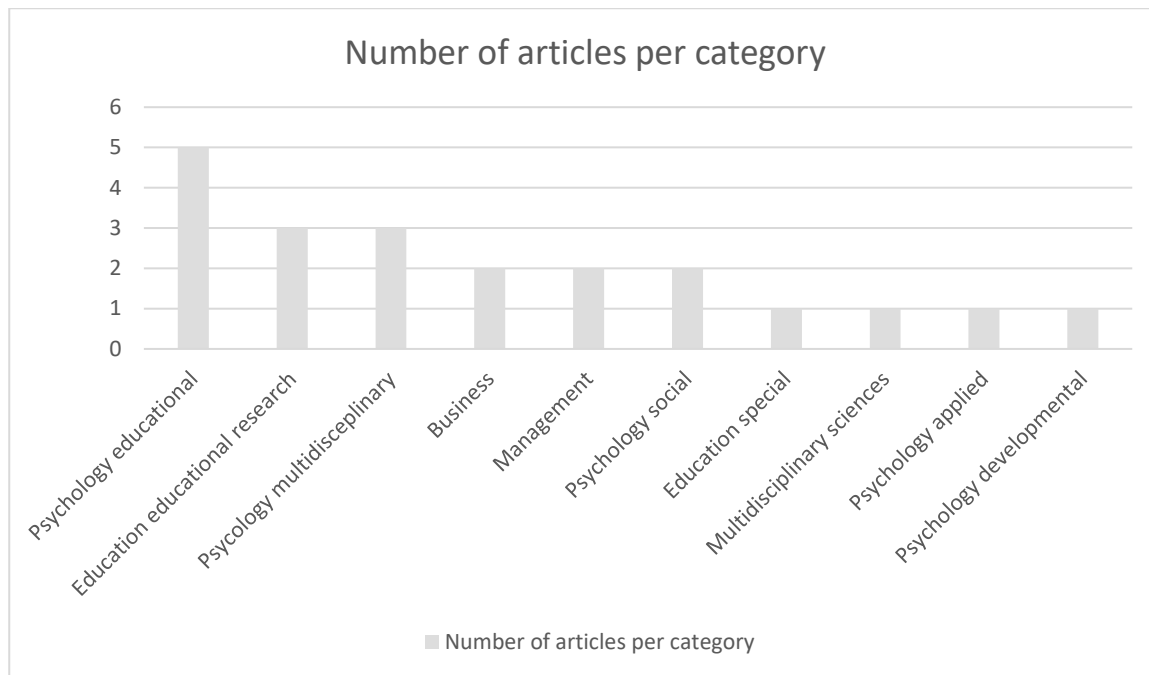


Table 1: Web of Science articles per category (own data)

7.2.2 VOSwiever analysis

VOSwiever is a map-creating software tool. For this work, it is used to show the bibliographical link between the articles used in the literature review. This is done to give the reader an understanding of the literature used, and its role in relation to general creativity literature. A bibliographical link translates to the cited relationship between the used articles. As a result of the broad Web of Science search, the bibliographic coupling between the articles, were expected to be fractured or at least weak.

However, a Voswiever analysis showed that this was not entirely the case. As can be seen in Figure 1 all the articles were bibliographically linked. However, the link strength of articles, as seen in Table 2 are somewhat varied, signaling that some of the articles were seldomly cited by other articles. Admittedly, this can to some degree be explained by how several of the articles are new, but also links toward that these articles are not commonly cited in relation to each other.

Finally, although all articles were bibliographical linked, they are not bibliographically linked to each and every article, suggesting that some of the articles have not been considered in relation to each other before.

All of this suggests that the small field of training individual creativity is linked enough that no knowledge is separated. This should theoretically suggest that there is a certain amount of harmony in the field, as no theoretical pool of knowledge is overlooked, but reality is seldom so neat – something which is proven later in this research.

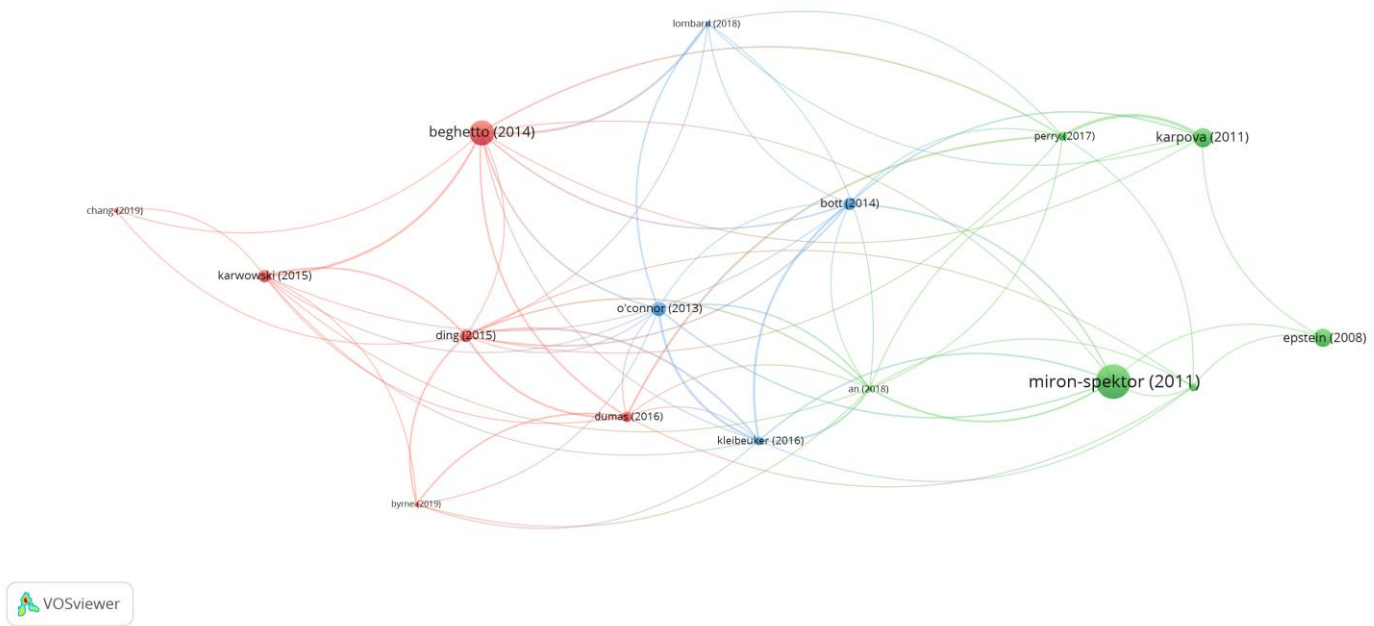


Figure 1: VOSviewer overview of literature articles (own data)

Article	Number of citations	VOSviewer link strength
(An & Youn, 2018)	1	343
(Beghetto & Kaufman, 2014)	41	368
(Bott, et al., 2014)	11	130
(Byrne & Thatchenkery, 2019)	0	44
(Chang, Chen, Chuang, & Chou, 2019)	1	73
(Ding, Tang, Deng, Tang, & Posner, 2015)	10	146
(Dumas & Dunbar, 2016)	7	120
(Epstein, Schmidt, & Warfel, 2008)	22	23
(Jin, Wang, & Dong, 2016)	4	141
(Karpova, Marcketti, & Barker, 2011)	24	108
(Karwowski, 2015)	10	102
(Kleibeuker, De Dreu, & Crone, 2016)	5	263
(Lombard & Müller, 2018)	1	126
(Miron-Spektor, Gino, & Argote, 2011)	77	664
(O'Connor, Nemeth, & Akutsu, 2013)	14	244
(Perry & Karpova, 2017)	5	154

Table 2: VOSviewer data

7.3 REPLICABILITY OF METHOD

The platforms used for finding the articles, are available online, and as the steps are described in the method, replicability should be high. However, the last stages of the article sort, were based on judgement from the author regarding the relevance of the articles. This means that other authors replicating these, might end up with some variations in the articles. Any mistakes made, are purely the responsibility of the author.

However there seem to be a certain general understanding within the fields of individual creativity training, resulting in a replicability despite differences. Meaning that even if the article sample could vary slightly, the results of the article pool should be somewhat similar to the findings presented here.

8 DEFINITIONS

This chapter is included to ensure readability. The different terms used in this paper are partly based on the commonly used definitions, and partly of off the articles included in the literature review, but are included here to ensure that the distinctions are understood. This is especially relevant, considering that most articles writing about individual creativity training works within one field (mostly either psychology or management), and as such are the terms commonly accepted. However, as this paper aims to include aspects from across the fields, and wishes to consider the results from several fields, being able to distinguish between terminology will create a better baseline for analyzing the literature.

8.1 CREATIVITY

Innovation – and thus creativity – is often brought forward as one of the most important requirements within organizations to ensure competitive and success. However, in most literature about creativity there is a duality; creativity is acknowledged as an individual ability, while simultaneously almost solely considered from an organizational perspective. This creates a mentality regarding creativity, which limits the understanding of what creativity is and can, and the result of this can be damaging; not only are we, as a society not tapping into a resource, but as individuals we miss out of an opportunity to grow and develop. It has earlier in this work been established that the field of individual creativity training is small, but by looking at the articles which exists, it is hoped to help develop the field, and create an understanding of the importance of individual creativity.

To ensure a general understanding for the reader and the assumptions about creativity further drawn in this paper, the concept and definition of creativity will briefly be considered. Although slight variations exist, creativity is generally defined as the ability to generate ideas which are simultaneously original and useful (Jin, Wang, & Dong, 2016) (Kleibeuker, De Dreu, & Crone, 2016) (Lombard & Müller, 2018) (An & Youn, 2018) (Ding, Tang, Deng, Tang, & Posner, 2015).

8.2 THE CREATIVE PROCESS

Bott et al. (2014) and Karpova, Marcketti and Barker (2011) furthermore includes the *process* of creativity in the definition of creativity. Although their arguments for considering the process a part of the outcome are valid, this work prefers differentiating between process and outcome, as defining creativity and defining the creative process as separate entities will create a further understanding of the concept. As such it is relevant to acknowledge that one is not necessarily considered more valuable than the other; rather the distinction between the creative output and the creative process is made to ensure readability and give nuances to the topic.

Although the understanding of a creative process, seems to be assumed in most works about creativity, this paper wishes to define it. This is done for two reasons; (1) to ensure readability for the reader, and (2) because the creative process and activation (which will be discussed throughout this paper), are similar enough that a differentiation is needed. Lacking concrete definitions from the literature, the distinction made here.

Therefore; the creative process is defined as the process used when working creatively towards a solution. As such, the creative process will often include the use of different activation methods and specific creative tools.

8.3 CREATIVE ABILITY

Another term used, especially by the interviewees is creative ability. This term is defined as closely related to creativity and creative process, but as there is a number of distinctions this term needs further definition. In this work, the term is used to describe an individual's ability to be creative, or to perform a creative process.

8.4 INDIVIDUAL CREATIVITY

In the literature used for this work, the distinction between creativity and individual creativity is often assumed. It is perceived that this is due to the works having a psychological mentality, over considering creativity as a part of the innovation process, and as such there are no need to make

the distinction. However, as the hope of this work is partly to consider individual creativity in relation to general creativity and innovation, the distinction is considered due.

Where the aforementioned concepts – creativity and creative process – are concepts describing an act, individual creativity includes who are doing the act; in this case the individual. This means that only creativity related to the individual – and not to the team or organization is covered by this distinction.

It should, of course, be mentioned that this does not mean that individual is defined entirely outside other levels of creativity, as it can only be assumed that structures from outside the individual – and as such also on other levels of creativity – influences the individual creativity. However, to be able to work with a concept, it is unavoidable to consider the concept at least partly outside of the context, and this is also the case with individual creativity.

8.5 ASPECTS OF CREATIVITY

Creativity is often considered to consist of several sub-areas, such as fluency, flexibility, originality, elaboration, risk-taking and so on. Generally, all of these are considered as having a part in creativity, and in the literature it is often assumed that by increasing one of these abilities, general creativity skills increase too (O'Connor, Nemeth, & Akutsu, 2013) (Kleibeuker, De Dreu, & Crone, 2016) (Perry & Karpova, 2017).

It is not uncommon to discuss how each of these weighs in the general creativity (O'Connor, Nemeth, & Akutsu, 2013). However, for this work the assumptions are that this is irrelevant; it is acknowledged that different aspects of creativity exist, and that different training likely affect different aspects. But as the aim of this work is to consider creativity as a whole, it is partly irrelevant *how* creativity increases, and more relevant whether it does. As such, the different aspects of creativity are acknowledged, but not considered unless found specifically relevant.

8.6 CREATIVITY TRAINING

Although most of the articles involved in the literature review does not delve on the definitions of creativity training, it is found relevant to include here. Interestingly, there is a duality regarding the

topic. In most articles, it is assumed that creativity, like any other skill, can be trained (or it is proven that it can be). However, in articles which discuss the nature of creativity, creativity is considered inherent and a constant human ability (Beghetto & Kaufman, 2014), and thus not something that can be increased at its core. However, the ability to utilize the inherent creativity can be trained. As such, what is meant when discussing creativity training, is not necessarily an actual increase of creativity – rather an increase in the ability to use existing creativity.

9 LITERATURE OVERVIEW

9.1 LITERATURE CONSIDERATIONS

Of the sixteen used articles in the literature review, only one is purely theoretical; the other fifteen performs tests on human subjects. These tests vary from ten to 3.414 participants, from online tests on university students to testing workers after eight months. They vary in focus, in nationality, in how they measured creativity.

This could theoretically have resulted in the articles being incomparable – but they are not. This is mostly due to the fact that among all articles, themes and results repeat themselves again and again.

Another aspect arguing for the compatibility of these articles, are the philosophical assumptions drawn for this paper. Although this are described further in the chapter “**Fejl! Henvisningskilde ikke fundet.**”, it is worth repeating to ensure common understanding.

This work is made, based on the ideas of Critical Realism, specifically the assumptions that the world is made of structures, and that every act performed are a result of said structures. In practice this means that when an act is performed, it is possible to guess about the structures causing it, and the more the act is repeated, the more is the assumption about the structure enforced – and the more are we capable of defining the structure.

In relation to this work, it means that even though it is acknowledged, that works involving thousands of people give a more precise picture of structures than works involving ten, both help define and enforce our understanding of the structure. As such – even though there might be slight differences in the articles used – the sum of articles results in a further understanding of the structures, of reality.

9.2 META CONSIDERATIONS

In this chapter, considerations are made regarding the validity of the articles used in the literature review. As all articles are peer reviewed, they are generally assumed to be true, however, it is due to mark that considerations have been made, both in regard to scientific accurateness and in regard to compatibility.

9.2.1 Methods

The methods used to test and measure creativity in the sixteen articles included in the literature review varies. The tests used to measure creativity was:

- Torrance test (five articles)
- Unusual Uses test (five articles)
- ECCI-I (which were developed and tested in one article)
- Guilford test
- Chang's Creative Performance Scale (CCPS)
- Remote association test
- Williams Creative Assessment Packet
- Self-Evaluation of Own Creativity

Note that some studies used more than one kind of test.

With the exception of CCPS all articles were assumed to test an individual's creativity, or an aspect of said creativity. CCPS instead measured the creativity of a product, and transferred that to the individual's creativity, assuming that one equalizes the other.

As written about in the chapter "Aspects of Creativity", creativity consists of several sub-areas. In the articles used for the review, not all aspects of creativity were always considered – rather it was assumed – as it is in here – that by increasing one aspect, general creativity will raise. As such, it is, for this work, decided, that although the articles used might only consider one or few aspects of creativity, that the general conclusions regarding creativity are still relevant.

9.3 LITERATURE TENDENCIES

The literature used are divided in six groups. These groups are defined below. Although this division seems to suggest that the articles are entirely separated, this is not the case. First, several of the articles discuss several of the tendencies. But more importantly; there are knowledge drawn from all the different tendencies, which will be used further on. As such, this overview is not meant as a separation of the articles, but rather to further the understanding of the data used in this work.

Here it should further be mentioned that there is no clear distinction regarding the VOSviewer bibliographical data, as shown in “Figure 1: VOSviewer overview of literature articles (own data)”, and the tendencies described below. This is assumed to be due to the size and popularity of the field, as sub-groups are believed to occur naturally with more data.

9.3.1 Tests of Creativity Training

The first group of articles solely focus on whether creativity training works or not. This is something which is either assumed or briefly defended in other articles, and thus an extremely relevant premises for further work in this subject. All articles clearly conclude that creativity training have a positive effect on creativity; as is seen summarized here by Perry and Karpova:

“The results of the study indicate that the creative thinking course was effective in increasing participant creativity measured by two different assessments: expert-assessed, using the TTCT [Torrance Test of Creative Thinking], and self-assessed, using the belief in their own creative abilities scale” (Perry & Karpova, 2017, s. 127)

Also Karpova, Marcketti and Barker (2011) and Epstein, Schmidt and Warfel (2008) concluded clearly that creativity training have a positive effect on creative performance. Both Perry and Karpova (2017) and Karpova, Marcketti and Barker (2011) uses the Torrance Test to measure creativity, and Epstein, Schmidt and Warfel (2008) developed a test (ECCI-i) linking behaviors to creative performance. The ECCI-i test was proven in the study to be valid, something supported in the similarities between results in the other studies testing creativity training.

However, the subjects in the Torrance-tested studies, are tested directly following the creative training courses, leading to questions regarding whether activation plays a role on the outcome, and regarding long-term effects of creativity training. Epstein, Schmidt and Warfel (2008) tests creativity eight months after the course, where an increase compared to post-test scores does occur, but with no immediate post-test it is impossible to conclude on changes in creativity due to activation (see “The Relationship between Actions and Creativity”), and since less than half of the participants in the study chose to retake the test, it is possible that the data is skewed.

9.3.2 The Relationship between Actions and Creativity

The bulk of studies included in the review, focused on how a specific action influenced creativity. In all situations the articles found a positive relationship; from looking at art (An & Youn, 2018), to meditating (Byrne & Thatchenkery, 2019) (Ding, Tang, Deng, Tang, & Posner, 2015) and to receiving specific quotes before the creativity tests (O'Connor, Nemeth, & Akutsu, 2013).

Several other articles also discussed how various actions or situations influenced creative outcome, all concluding that a positive effect could be triggered.

Such a consensus aboard a wide area of different actions, does initially creates questions regarding the validity; will everything create a positive outcome on creativity? However, the research includes a number of control groups where an action results in no to little increase in creativity, supporting the conclusion drawn among the papers; specific (but not all) actions increase creativity.

This area is discussed further in the chapter "Training vs Activation".

9.3.3 The Link between Personalities and Creativity

Another major theme in the articles, were regarding how different personalities reacts to creativity training. The articles consider a number of different personality traits, and the overall conclusion throughout the articles is that personality seems to play a role on creativity (Jin, Wang, & Dong, 2016), (Perry & Karpova, 2017), (O'Connor, Nemeth, & Akutsu, 2013), (Karwowski, 2015), (Chang, Chen, Chuang, & Chou, 2019) (An & Youn, 2018).

As this paper does not aim to discuss personality types in relation to creativity, an in-depth analysis in this area is nor performed. However, it is deemed relevant to mention that the findings regarding the relationship between personality and creativity concludes that all individuals are receptive to creativity training; personality simply plays a role regarding how quickly the changes in creativity occurs.

In other words, everyone can learn creativity, some just learn it faster.

9.3.4 The link between Perception of Creativity and Creativity

Several articles discussed how an individual's perception of own creativity reflected on their actual creativity. There is a clear positive relation between the two, both in regard to current creativity level, and in regard to perception to training. In other words; individuals who perceives themselves as creative, are more creative and have an easier time learning creativity (Perry & Karpova, 2017), (Karwowski, 2015), (O'Connor, Nemeth, & Akutsu, 2013) (Chang, Chen, Chuang, & Chou, 2019).

This is discussed further in the chapter "Method of Measurements", as this method is used in the data-collection process.

Karwowski (2015) takes this a step further, and researches how the creative environment of an individual affects the individual's perception of own creativity. He defines that in a high-creativity environment, individuals perceive themselves as more creative, and will, as a result be more creative. Interestingly in neutral and in low environments both, the correlation was neutral.

9.3.5 Creativity's Influence on the Mind

The next theme in the review are about how creativity influences the mind. These articles focus on different aspects of this area; one concludes that adolescents are more prone to creativity than older persons (Kleibeuker, De Dreu, & Crone, 2016), and one concludes that creativity training increases lower-level executive functioning (Bott, et al., 2014). Neither of these areas influences the research conducted in this paper, and as such they are not found relevant to consider further.

9.3.6 Teaching Creativity

The last article, which does not match any other categories mentioned, are by Beghetto and Kaufman (2014). This is the sole purely theoretical article in the review; it focuses on how to incorporate creativity training as a part of classroom teaching. Although parts are used throughout this paper, the article as a whole is not relevant in this context, and are as such not analyzed further.

10 TRAINING VS ACTIVATION

Although, as described above, there exists a general consensus in the individual creativity training about a number of things, there is one area in the literature, which seems to be contrasting. Most of the articles assume that creativity training will – at least to some degree – long-term increase an individual's ability to be creative, where other articles refers to “activations” which will temporarily activate the creativity in an individual. However, articles discussing one, seems to not be aware of – or consider – the other.

This creates a number of issues. First, there exist no clear definitions on the difference between the two, often making it unclear whether articles refer to activation or creativity training. Assuming that both of these exists as individual terms, it seems that researchers cannot be sure that they have not “only” activated creativity, when trying to test creativity training. This is further complicated by most creativity tests performed in the literature review being short-term only, and thus not concluding on whether the increase in creativity are based on activation on training.

In an attempt to counter this, this chapter is dedicated to the area of training vs activation.

10.1 ACTIVATION IN THE LITERATURE

Of the articles included in the literature review, only two somewhat directly discusses the concept of activation; *The Creative Stereotype Effect* by Dumas and Dunbar (2016) and *Consequences of Beliefs about Malleability of Creativity* by O'Connor, Nemeth and Akutsu (2013). Both discuss creativity as being malleable, and discuss creativity as a “[...] malleable product of context and perspective” (Dumas & Dunbar, 2016, s. 1). Both articles describe the differences between considering creativity fixed or flexible, and agree that creativity is influenced by contextual factors.

Although they do not define what exactly constitute a “contextual factor”, they do, while arguing that creativity is malleable, list earlier research-areas which support their point. This include “[...] meditation, diet, walking, music, cannabis, or mood” (Dumas & Dunbar, 2016, s. 2-3).

Assuming that this list is correct (although not exclusive), it gives us a feeling of what constitutes activation, and as a result, several other articles from the literature review, transform into the area of activation. This include Byrne and Thatchenkery (2019) and Ding, Tang, Deng and Posner (2015).

Both of these studies research meditations influence on creativity. Although Byrne and Thatchenkery consider meditation over time, it is in relation to whether creativity increases with *more* meditation, not in regard to whether the gained creativity changes after activation. There is nothing in the studies, suggesting a lasting creative effect, and it is not an area even considered in the research conducted. With lack of evidence against or for, these articles are considered in regard of a possible true effect of activation.

Also, the research by Miron-Spektor, Gino and Argote (2011), are considered activation. Despite their work on paradoxical frames not fitting in the list presented by Dumas and Dunbar (2016), their work is inherently aimed to be situation specific, and is, at such, assumed as temporary method to increase creativity. This matches within the frames of activation.

However, as there is created no clear outline for activation, and the situations where the tested activations did not increase activation are limited, it is impossible to limit what could potentially activate creativity.

10.2 CONSIDERATIONS

These examples all show, that activation exists in the literature. However, unless activation is the direct theme for creativity, (Dumas & Dunbar, 2016) (O'Connor, Nemeth, & Akutsu, 2013), it seems to not be considered – not even in the works that focus on activation of creativity, over training. In these works, this is not truly an issue either; they test and prove their hypothesis, without the activation vs training mentality shadowing their conclusions – as long as the reader does not start drawing conclusions on their own, regarding the timespan of the activation.

However, in works that discuss creativity training – where there seems to be an underlying assumption regarding the timespan of the increased creativity, to be more than temporary, this issue plays a role. In most cases from the literature review, creativity tests are conducted within a very brief timespan of the creativity training. Without understanding the long-term effects, there are no guarantee, that the measured increase in creativity is a result of actual creativity training, or a result of activation from the perceived “creativity training”. In other words; are individuals’ creativity actually increased from training, or simply temporarily activated?

10.3 DEFINITION OF ACTIVATION

To ensure a clear differentiation, and to make the theoretical arguments used henceforth clear, a definition of activation will be described. This is done, based on the articles utilized in the literature review, and is further defined for the purposes of this research.

None of the articles in the literature review, does at any point clearly define the concept of activation. As mentioned above, they discuss its malleability (Dumas & Dunbar, 2016) (O'Connor, Nemeth, & Akutsu, 2013), and furthermore have an inherent short-term-effect assumption (Dumas & Dunbar, 2016) (Miron-Spektor, Gino, & Argote, 2011) (O'Connor, Nemeth, & Akutsu, 2013). No other literature has found clearly defining activation either, likely due to it seldomly being recognized in studies.

It is, in the literature, mentioned how activation possibly works by temporarily reduce limitations on creativity, rather than by directly increase creativity – a claim mentioned but not defended nor proved (Miron-Spektor, Gino, & Argote, 2011) (Dumas & Dunbar, 2016).

However, no matter the reason that activation works – an area which should be studied in its own right – a clearer definition, is here provided, based on the inherent assumptions regarding activation in the literature utilized:

Activation is considered any means used to temporarily increase creative performance.

10.4 THE UNDEFINED ACTIVATION IN THE LITERATURE

So, to summarize from above; creativity activation exists as something different from creativity training. As the literature review were aimed solely towards literature training, how then did activation research occur in the supposedly creativity training literature review conducted in this study? One obvious conclusion would be that the researcher failed in defining the search areas for the literature review. However, this is not believed to be the situation; partly due to the considerations regarded in the review are deemed to be sound, but mostly due to another theory matching the situation: The undefined nature of creative activation and its lack of recognition in the creativity training literature.

Although a number of studies exists about activation – including an assumed number of studies not included in the literature review – activation seems to seldomly be mentioned in the creativity training literature. In the literature reviewed for this study, activation was not mentioned once in the literature focused on creativity training, and a number of articles focused on activation aspects, did not differentiate between creativity training and creativity activation, easily leading the reader to the conclusion that there exists no difference.

Furthermore, almost all the studies performed on creativity training does not consider long term effect of creativity training, and the one that did, did not include short-term post-test results for comparison.

This lack of data could mean that a number of activities considered training – and thus considered to have a long-term effect – are only temporarily activating the creativity of the test subject, creating a false-positive result of the creativity training. It could also create a false double positive, if creativity training simultaneously trains and activates creativity – an assumption that seems likely – and would as a result skew the assumed effect of creativity training, when compared with training which does not activate creativity.

Without this area being tested further, it is impossible to know and understand exactly how activation and creativity training influences creativity in short and long term. As of now the theoretical assumptions suggest that four states of creativity training and/or activation can exist:

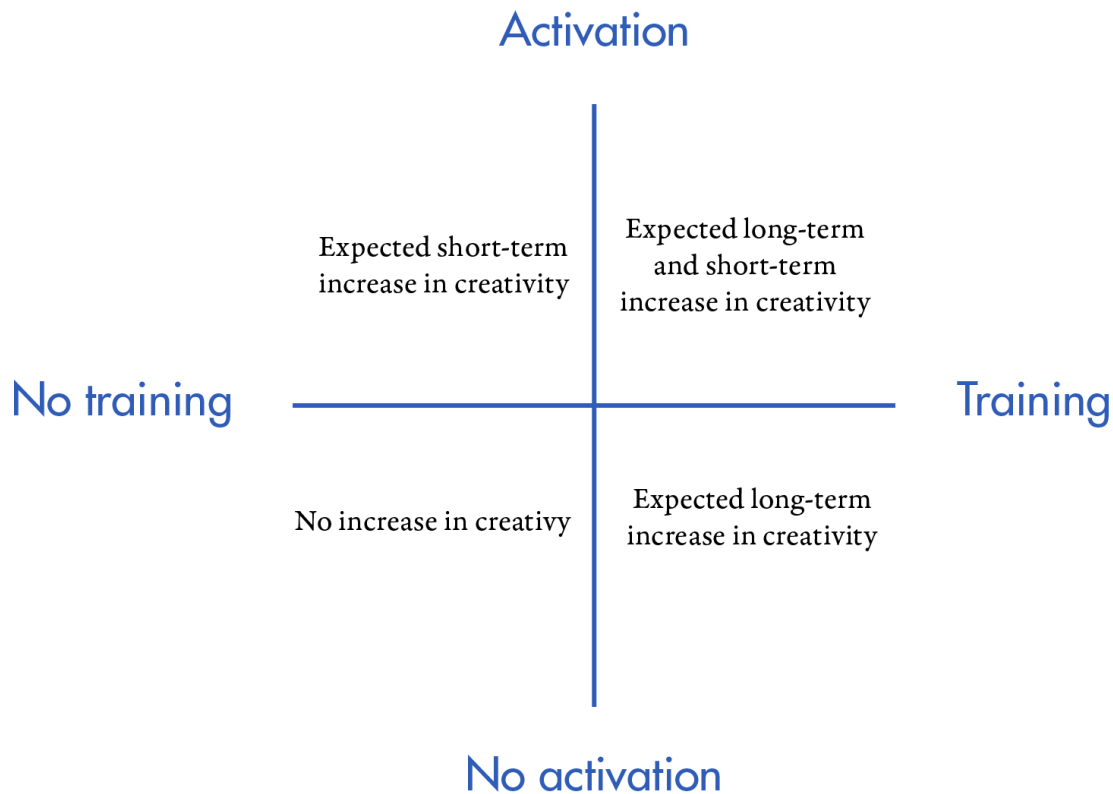


Figure 2: The activation - creativity training relationship

Although the area of activation in itself is interesting, the areas involving training are found immediately relevant. This is mostly due to the fact, that with activation as an overlooked factor in a significant amount of the research, the conclusions drawn in said research becomes questioned; what if the increase in creativity in the collected data, are due, at least in some part, to creative activation, and not creative training?

Due to the varied nature of activation, it is assumed that most creativity training will include some creativity activation. Although not all articles included in the literature review focused on creativity training describe situations fitting with the assumptions of activation, one did; Karpova, Marcketti and Barker (2011) describes how they use frames as a part of their creativity training program, something earlier in this chapter argued to fit within the activation area. The other articles focused on creativity training either did not mention how the conducted the training, or none of the examples they used, could be directly defined as creativity activation, without further data. The creativity course used in this work to collect data, shows aspects related to what is categorized as

creativity training, and aspects related to creativity activation. Without further knowledge regarding the methods used in the creativity training described in the articles from the literature review, it is assumed that this balance exists in most undefined creativity training.

As such, it is assumed that creativity training will increase creative ability, but that some of this will be due to activation, and as such that creative ability will diminish slightly over time, as the temporary creative abilities from activation diminishes, leaving only the creative abilities from creativity training, if not activated;

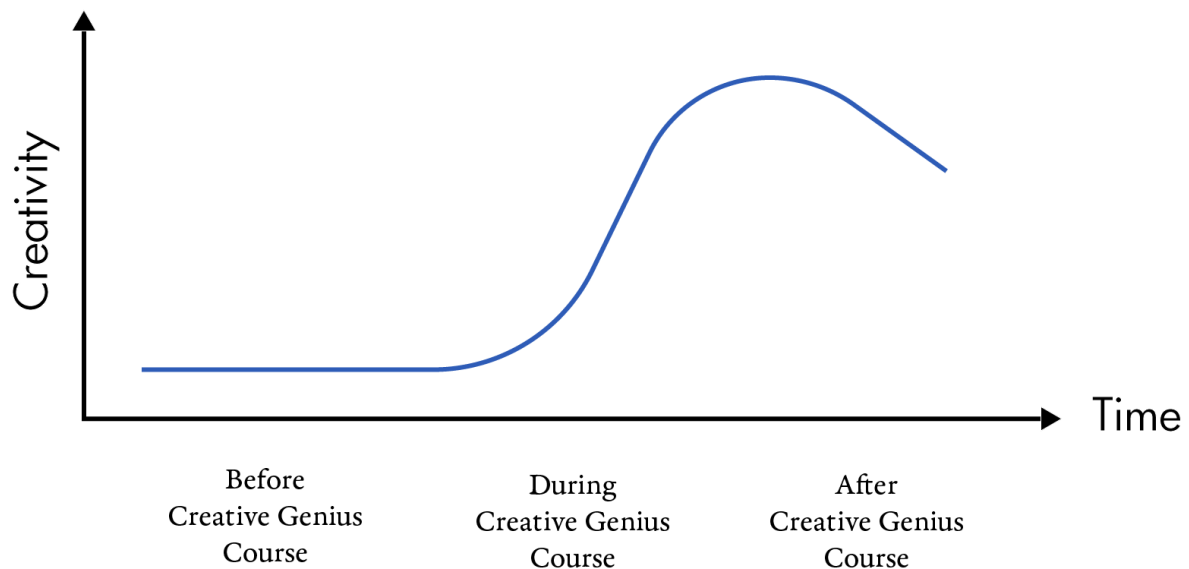


Figure 3: Expected level of perceived creativity

11 PROBLEM FORMULATION

This described discrepancy in the literature, moves the focus for the future research of the paper, from increasing the understanding of the structures which governs individual creativity training, to investigating the role of activations on creativity, specifically in the setting of creativity training, and whether this have consequences for the way creativity training is perceived and tested in the research. This leads to the following problem formulation:

What role does activation play, on long-term creativity after creativity training, and how does this effect the current method of establishing the success of creativity training?

Thus, the aim of the research going forward, based on the literature conducted, is three things. First, this study wishes to research and specify and/or clarify the relationship between creativity, training and activation. Secondly, this research hopes to re-confirm an existing long-term increase in creative performance after creativity training. Third, it is wished to further specify which actions could constitute activation.

As a bi-product of the qualitative method used to collect this data (see more in the chapter “Research Method”), this study will also highlight interesting structures in the aftermath of long-term creativity training – an area with very limited, if any, existing data.

12 RESEARCH

The aim of this chapter is to outline how the research of this topic will continue. As of now, it has been laid clear that activation exists as something different from creative training, and that most creativity training does not consider activation. Furthermore, it has become clear, that as a result of this, questions could be asked regarding some of the existing creativity literature – especially regarding literature solely including short-term creativity level measures.

12.1 EXISTING LITERATURE

The forward focus in the area, have changed slightly from the original literature review, and as such it is judged appropriate to re-visit the literature, to ensure the research-base henceforth is solid. As the original literature review was focused on creative training, that will not be discussed further, but it is deemed appropriate to consider longitudinal studies of creative training. A full literature review of this area is not performed, due to the limitations of this study, but the area where researched enough to qualify for further development of this study.

12.1.1 Longitudinal Studies of Creativity Training

A web of science search was performed, searching for the term “Creativity” and limited to English articles with the word “Training” (1.148 articles). Search parameters further included the word “longitudinal” (22 articles) or “long-term” (38 articles). These articles were sorted based on article names, where articles referring to any data regarding long-term effects of creativity were included. This left three articles: (Rose & Lin, 1984), (Glover, 1980) and (Im, Hokanson, & Johnson, 2015).

Of these, one was inaccessible due to payment requirements (Rose & Lin, 1984).

The two other studies have a similar aim; to define the long-term effects of creativity training. It is here interesting to note, that despite the fact that the two studies are conducted 35 years apart, there methods are similar; both developed a creativity course focused on finding new solutions, used students as their test group and both used the Torrance test to measure creativity. Both studies found an increase in immediate post-testing and in long-term testing (eleven months after (Glover, 1980) and between one and four years after (Im, Hokanson, & Johnson, 2015)).

Interestingly, the differences between post-tests and long-term post-tests were insignificant, suggesting that creativity training does not decrease over time. This could be due to a number of reasons; that activation either (1) does not play a role in the Torrance test, (2) are activated automatically when taking the Torrance test (3) are not activated at the time of the Torrance test, (4) are not automatically activated after a creativity course, (5) that individuals taking a creativity course continually activate their creativity, or (6) some other unknown reason.

12.1.2 Studies on Creative Activation

A literature review specifically searching for activation of creativity was attempted.

A web of science search was performed, searching for the term “Creativity” and limited to English articles with the word “Activation” (420 articles). After attempting a sort based on article names at this stage, with focus on meta-articles referring to activation of creativity, no articles discussing the theory of activation were found. A number of articles discussing different forms of activations were found, but not included in this study, as an increased understanding of other specific types of activation was not found valuable for this study.

13 RESEARCH METHOD

The aim of this chapter is to define the methodology and considerations for collecting data. The data will be collected through semi-structured interviews, with individuals who at some point finished the semester course “Creative Geniuses” at Aalborg University. As a result, this research will differ significantly from research included in the literature review, as the subjects included have taken a longer lasting course, and as the data is not collected immediately after the creativity training. Despite having some similarities with the literature described in the chapter “Longitudinal Studies of Creativity”, this work will differ from these due to a focus on activation, over long-term creativity effects.

Lastly none of the studies included focus on qualitative data, and as such it is assumed that this study will discover possible structures which were not found in the already existing data.

13.1 THE CREATIVE GENIUS COURSE

To ensure understanding of the common factor in the interview sample, the Creative Genius Course, which all tested individual took, is here briefly described. This description is based on the knowledge of the author.

The Creative Genius course was taught at Aalborg University, and existed in two versions; a semester for graduate students, and an education for employees. In most areas these courses were similar, but the participants varied, as one was aimed for students, whom took the course as their ninth semester, and the other were for professionals, whom took the course specifically to increase a job-related skillset. The professionals – or their place of employment – would furthermore pay to participate, where the course for students were offered for free. The aim of the 30 ECTS point course, was to give the students a throughout practical and theoretical understanding of creativity (Aalborg Universitet, 2019). In both instances, the students of the course, varied over a broad number of backgrounds, something which have not been found in the examples described in other literature.

It should be noted, that although the general concepts taught in the course have been consistent, the methods used were described to changed slightly over time. This is considered to be within acceptable parameters, and not have greatly influenced the creative training received.

The course educates in both what is defined as creative training, and what is defined as creative activation, despite the course not utilizing those terms.

As all test-subjects have taking the same course, a certain amount of common structures is expected to be found in the individuals' relation to creativity, despite the varied backgrounds.

To ensure readability, terms native to the Creative Genius Course, which are judged relevant, are described when fitting.

13.2 RESEARCH METHODOLOGY

To ensure validity and reliability of the conducted data-collection process, the methods utilized are described in this chapter, including the methodological considerations and direct methods.

13.2.1 Interview Reasonings

As described above, the aims of the interview are to conduct data on (1) the relationship between creativity, training and activation, (2) re-confirm the long-term increase in creativity after creativity training, (3) define which actions constitutes activation and (4) define existing structures within the area of long-term creativity training.

The method of data-collection chosen to ensure the greatest understanding of the existing structures constituting these areas is semi-structured interviews; an interview technique, which define areas of topics and meta-questions, but defines the detailed structure in the interview situation (Drever, 1995). This method of data-collection simultaneously ensures the comparatively of the different interviews, and that no relevant area of the individual cases are overlooked. With other words; this method is believed to give the clearest understanding of the relevant structures playing a role in this context.

As critical realists, the interview technique gives a number of opportunities, in relation to understanding the structures governing the researched area, as the communication with the

interviewee gives the opportunity to develop on the theory tested (Smith & Elger, 2014). Here especially referred to the possibility of probing; a method where the interviewer can ensure common understanding of terms, test opinions or statements and gain clarification of relevant areas. This sub-method is assumed by the author to further increase an understanding of structures in the desired fields.

Also methods of theory testing, as discussed by Smith and Elger (2014), where the interviewees are confronted with the stage of the developed theory, and their responds help form the theory together with the analyzed data.

Further reasoning for choosing this method of data-collection, is the abilities of the researcher conducting the interviews, as the skills of the researcher in this context plays a relevant role (Barriball & While, 1994). In this case, the researcher conducting the interviews, the author of this paper, have a vast experience with semi-structured interviews, throughout her educational research.

Lastly, it should be mentioned that the author purposely aimed for a positive experience for the interviewed individual in the process, as this was believed to ensure the greatest data access.

13.2.2 The Lack of Triangulation

Due to the limitations of this study, and aim as an explorative study, this research focus on only on data source. From a critical realistic point of view, this severely diminish the conclusions drawn regarding existing structures, as any findings are forced to be based upon a wide number of assumptions regarding the validity of the data (Smith & Elger, 2014).

Furthermore is the method of data collection based on a theoretical creative unit, which results in solely a possibility at suggesting at possible structures, rather than defining exactly how these structures impacts agency.

Including different data could increase not only the understanding of possible structures, but might also illuminate possible structures which were not found, due to missing data. The missing data removes this study further away from reality, and results in findings which might only show specific instead of general structures.

However, this work moves toward a seldomly researched area, in a contextually new methodological way, and as an explorative study, the findings presented in this research is considered valid and relevant, despite the knowledge that it is limited. The structures presented in the conclusion, seems to refer to a general tendency, which should be researched further.

13.2.3 Method of Measurements

As a relevant area of the research conducted, relies on assumptions regarding the individual's creative ability, it becomes relevant to consider the method of measuring an individual's creativity. Although the Torrance test seems to be widely considered the standard for creative assessments, existing research suggests that self-defined creative ability gives a correct estimate of actual creative ability (Jin, Wang, & Dong, 2016) (Perry & Karpova, 2017) (O'Connor, Nemeth, & Akutsu, 2013). This method of measurements is considered perfect for semi-structured interviews, as the perception of the interviewed persons creativity, is found to be easily communicated, without the interviewer's method of asking influencing the answers. This ensures a method of understanding long-term developments, without having long-term data. Furthermore, by not requiring the test-subjects to perform tests, it is expected that the focus on the interviews will be more relevant to the aims of this study.

Here it should be mentioned, that according to Perry and Karpova (2017) the assumed amount of creative change does not match the actual change when measured by the Torrance test, meaning the although an self-assumed increase or decrease is considered correct, the self-perceived assumption regarding the size of the change is not.

Furthermore, none of the studies conducted in this area, discuss how correct the perception of own creativity is after the fact, and as such it should be considered that reminiscent considerations do not match actual at-the-time considerations. For this study it is assumed that the recollection matches the reality, but until this is tested and proven, this limitation should be kept in mind.

13.2.4 Interview Method

13.2.4.1 Interview Invitation

An invitation (seen in “Appendix I: Interview Invitation”) was sent out to groups created for Creative Genius Alumni on Facebook and LinkedIn April 30, 2019. The invitation received seven answers (not including a test interview performed as part of developing the interview guide), and interviews were planned and conducted the following week.

As all interviewees were volunteer, there exist a possibility that the findings are biased, as it is possible that only individuals who actively use creativity, or individuals who have a positive outcome on creativity and the Creative Genius course might volunteer. This might result in a possible bias in the data, and thus in the research conducted based on the data, which does not match the reality. However, these limitations is accepted as a natural consequence of the means and possibilities of the research, especially considering this research’s aim of solely explore possible discrepancies in the current understanding of the structures relating to creativity, creativity training and activation of creativity.

The volunteer of participation also means that there is no control regarding the data-sample, meaning that an even distribution of time spend since participation in the course is unlikely. This might mean that only structures covering a specific and limited set of long-term effects are uncovered. Although the effect of activation theoretically does not change in relation to time-spend since creativity-course, no data persists regarding the creativity gained from creativity training (and thus, not from activation), and longer-term data might suggest at this.

13.2.4.2 Interview Guide

The interview guide can be seen in “Appendix II: Interview Guide”.

The interview guide was developed together with Soheib Ider and Martin Hansen. Soheib Ider is a Master of Innovation, Knowledge and Entrepreneurial Dynamics (the same educational background as the author), who have not taken the Creative Genius course. Martin Hansen is a master’s in international business who have taken the Creative Genius Course. These were included in the

development process to ensure a general validity of the research guide, and to ensure that no relevant areas were overlooked in the collection of data.

The interview guide was developed based on a critical realistic mentality, especially referring to the critical realistic interview techniques described by Smith and Elger (2014). The areas of focus was based on the area of research found in the literature review, and a wish to theory test. Theory testing is a method often utilized by critical realists, where experts are invited to develop on theories along with the researcher (Smith & Elger, 2014; Easterby-Smith, Thorbe, & Jackson, 2015). This was practically done by describing the theories and issues regarding them, uncovered in this work, and letting interviewees respond to the findings, including aiming for further theorizing based on their expertise.

After the development of the interview guide, Soheib Ider was included, to test if the authors involvement in the field of creativity training caused areas which should be covered, but where not. A few areas were questioned and included in this work, to ensure readability and replicability from non-Creative Genius alumni.

The interview was then tested on Martin Hansen, and input from him was included in the method of interviewing to ensure the best results from the interview.

The interview had a number of focus areas. The main purpose was to gain data regarding how they perceived own creativity before, during and after the course. Secondly, it was wished to understand the individuals use of activation. By understanding these two areas, it was assumed that tendencies in the relation could be found, and thus structures governing this relationship might be discovered.

Other areas which were considered relevant, related to how the individuals perceived creativity, how they perceived the Creative Genius course, whether they had received any further training, and what relevance they put on creativity. Furthermore, as with semi-structured interviews, any areas which naturally developed, and which were found to in any way give relevant information regarding this area, were explored.

14 DATA

14.1 INTERVIEW BIASES

As described in the chapter “Bias”, the participatory role of the researcher were expected to at least partially influence the interview techniques. This is to some degree always an issue relating interviews, as researchers needs some level of understanding of the topic covered, as described by Easterby-Smith, Thorbe and Jackson (2015).

It is assumed that all data acquired are accessible for any researcher aiming to research this area, partly due to the perceived willingness from interviewees to discuss their experiences of creativity, regardless of the possible community-feeling associated with a common alumnus, and partly as the focus of the conducted interviews were on structures governing creativity training, and nor Creative Genius specific structures. However, without further research, defining the generality of said structures is purely theoretical.

Despite this consideration, it was found that the knowledge of the researcher regarding events and terms used to describe areas of the Creative Genius Course, allowed the researcher to filter through relevant and irrelevant data, easier than what could be assumed from someone not having participated in said course. As such, a bias is recognized in this regard, and this bias is assumed to possible have shaped the information gained through the interview, despite the researchers best efforts to ensure replicability. As this research is the only example of a qualitative study of the effects of creativity training, it is impossible to compare structures in this field, to a degree where it can be said with an acceptable level of certainty that this bias have not influenced the data collection process.

Although an assurance of minimal biased always is wished for in research, this reality is accepted in this context as acceptable, partly due to the explorative aim of this research, and partly as even with these limitations and biases, the suggestions regarding structures concluded in this work, is considered correct from a critical realist perspective.

With the exception of the interview of subject 1, which is manually translated from Danish and transcribed, all interview are transcribed using an online software tool (Happy Scribe, 2019) and gone through to ensure no direct mistakes.

14.2 THE INTERVIEWEES

Eight individuals were interviewed as part of collecting data for this work. One of these was Martin Hansen, whom was involved in the methodological development and testing of the interview guide. Due to this, data considered from his interview, is considered with a certain amount of skepticism, as pre-knowledge of the researched area might have influenced his perception of the areas discussed in the literature.

To ensure that the structures governing any collected data is presented, the individuals partaking in the interview is presented based on gained information regarding them.

To ensure the anonymity of the interviewees, all – with the exception of Mr. Hansen – is referred to with acronyms. Presented order is matching the order of interview.

<i>Acronym</i>	<i>Sex</i>	<i>Age</i>	<i>Type of Interview</i>	<i>Nationality</i>	<i>Place of residence</i>	<i>Master / job at time of participation in Creative Genius</i>	<i>Year of participation in Creative Genius</i>	<i>Group designation</i>
Martin Hansen	M	28	Phone	Danish	Denmark	International Business (student)	2016	B
Subject 1	M	30	In person	Danish	Denmark	Engineering (student)	2016	A
Subject 2	M	33	In person	Romanian	Denmark	Culture, Communication and Globalization (student)	2017	A
Subject 3	F	28	In person	Danish	Denmark	International Business (Student)	2016	B
Subject 4	M	28	In person		Denmark	Business Administration and Innovation (Student)	2016	A
Subject 5	M		Skype	Nicaraguan	Nicaragua	Information Architecture (student)	2016	A
Subject 6	M	49	Skype	Danish	Denmark	Engineer (employment)	2018	C
Subject 7	F	24	Skype	German	Germany	Business Information System Engineering (student)	2018	B

14.3 SETTING CONSIDERATIONS

The interviews were performed in three different settings. The test-interview was performed over phone. The other interviews were either performed in person in a library or at the authors home, or by skype. In all settings different considerations should be considered as a possible influence on the data. The in-person considerations relates to especially disturbances from surrounding people. The virtual interviews relates to disturbances related to network issues resulting in interruptions.

Furthermore could issues such as chemistry between interviewer and interviewee have influenced the data collection process.

The author considered these issues, and countered them to a realistic degree, and although it is impossible to state a complete neutrality, the uniformity in the data suggests an acceptable level of success.

14.4 THE SEARCH FOR STRUCTURES

The analysis of this work was based on a critical realistic approach, specifically a belief that structures governs the behavior of agencies. As such, the analysis of this work was done with the aim of discovering recurring behavior surrounding the interviewed individuals, which might suggest at said structures.

Due to the circumstances of this study, especially the limited data, all structures uncovered are considered a possibility, not a reality.

14.5 TENDENCIES IN THE DATA

In the initial analysis of the data, it became clear that a number of structures differentiated in clusters. With other words, it seemed that there were some non-insignificant differences between the interviewees. As this was considered further, a tendency was defined, resulting in a clear distinction in data between three groups. These groups – and what defines them – are discussed here, to make it possible to differentiate between them in the analysis.

In the first group, further referred to as group A, initial analysis suggests that they actively use activation and perceive and increase in creativity since the tie of the Creative Genius course. Creativity became a truly incorporated part of their life after the course, and to at least some degree, the members of this group considers creativity to be a relevant and important aspect of life.

In the second group, further referred to as group B, the initial analysis suggests that, although positive about creativity, they seems to not have cooperated creativity or activation into their lives to the same degree as group A.

The third group, referred to as group C, consists of one individual, whom took the Creative Genius for professionals. His believes regarding creativity differs enough from the tendencies found in the other groups, that it is seemed relevant to consider him separate from the main tendencies found.

Interestingly, all individuals in group B, had some level of relationship with the author beforehand, through studies at Aalborg University.

Considerations where made regarding why these groups differentiated so clearly.

Group C is believed to differentiate due to the differences in circumstances. As a creative professional, the course is often taken with and aim of practical knowledge in mind, as it is expected from the workplace that the time and money invested can translate to practical applications. Furthermore had the individual in Group C a tendency to focus on facilitating creativity for others, even when inquired about personal perceptions of creativity. This change in expectations is believed to be a possible reason for the difference found in the data. However, without more examples, it is impossible to draw any direct conclusions, and thus, until more research is acquired regarding these differences, any conclusions drawn regarding group C, needs to be understood with a certain amount of skepticism.

Several reasons for the discrepancies between group A and group B were considered. The first reason, which have not been disproven, would be that the personal connection to the author resulted in a differentiation in the presentation and collection of the data, causing the seeming difference. Although a not uncommon risk when making semi-structured interviews, this was deemed not the case for two reasons; first, that the method used by the author were sound and countered this possibility. And secondly, that another finding matches the discrepancy more; that

the persons volunteering for interviews, did this based partly on two reasons; either because their connection to creativity was deep enough that they were willing to invest the time and energy required to be interviewed (justifying group A and C), or that their personal connection to the author insured this (resulting in group B). This hypothesis were unable to be concluded on, but is assumed to be true, and as such, it gives some suggestions regarding the sample that should be considered. First, that the sample might not be statistically correct; most likely the group that group B represents are bigger than the data statistics would suggest. Secondly, there could exist a number of groups whom had no incentive to participate in the interview, and which will thus not be presented here.

Although this means that the conclusions drawn in this work might not be representative, it does not mean that they are not relevant. Partly, several of the conclusions drawn, will be based on more generally observed tendencies, which might be representative, and partly it is believed by the author, as a critical realist, that any move towards reality is considered a benefit to our understanding of the world around us. As such, as long as this is kept in consideration, the results of this research still be valid and relevant.

15 FINDINGS

This chapter aims to present, analyze and discuss the collected data. The purpose here, is to define and present any possible structures, and to discuss the possible implications of these.

As defined above in 14.5 Tendencies in the Data, different structures were found in the groups defined as A, B and C. These tendencies are subsequently presented under this definition when relevant.

15.1 DEFINITIONS

Before analyzing the data, one key definition, which differs throughout the interviewees, needs to be addressed; creativity vs creative ability. These terms are defined above, in the chapter “Creative Ability”.

Several of the interviewees, seems unable to define and discuss creativity in relation to themselves, and instead preferred referring to any changes occurring during the period discussed, as changes in their creative ability. This seems to stem from a belief that creativity is a constant value in the individual, and as a consequence cannot increase or decrease. They seems to perceive, instead, that the individuals *ability* to use creativity can change.

It was tested in the interviews how these individuals defined creative ability, and it was found that their definition matched how the term creativity is referred to in this work and by the remaining interviewees. This testing was especially conducted in relation to discussing how performing activations influenced the interviewees perceived creativity. Here several persons were unable to answer or were uncomfortable about answering, but when discussing how activations influenced their ability to be creative, they were able to define an answer, not only in relation to performing a creative process, but also in regard to their perceptions of the creativity level associated with this process.

To further confuse the matter, the individuals whom did not have this distinction issue, also used the term creative ability, here referred to as the ability to perform a creative process, matching the earlier definition in this paper.

To ensure readability, the terms used in the interviews, will henceforth be described based on the terminology defined in this paper, related to the meaning the interviewees give, rather than the direct words used. This means that the terminology matches the perceived meaning, over the exact terms, and thus that the interviews have to be considered in their wholeness for future researchers, to ensure tacit understandings, over terminology used.

This issue have not been found relevant in existing literature, but it should be considered if it is ever wished to perform another qualitative analysis of creativity. If such research is performed, without clarifying the meaning from interviewees, the results could be a skewed understanding of the data. Furthermore, this difference even within the borders of one creativity course, could suggest that the differences in terminology is greater among different courses, and as such, if a cross-analysis of the qualitative effects of creativity training is ever performed, terminology needs to be considered and defined, to ensure homogeneity in the data.

In relation to this work, no structures were perceived relating to these differences, and no consequences were considered. However, this difference in terminology might be a result of yet unknown structures, which could be defined utilizing a different methodology or with a bigger sample. However, without any clear structure, not any clear consequences, this work will henceforth match the terminology to the definitions used in this work, to ensure understanding and readability.

15.2 BIAS

A number of bias needs to be considered in the context of the analyze. First, the involvement from the author, as discussed earlier, might influence the author, especially regarding the area of looking for pre-perceived structures, over analyzing structures based on the data. As this would be a subconscious effect, the author cannot make guarantees against this bias. However, the author have ensured to clarify the reasoning for each conclusion drawn, thus ensuring that the reader will be able to follow the deductions made leading to the perception of presented structures, and thus aimed to avoid pre-conceptions influencing the findings.

Another bias – although of a different nature, is the lack of individual data. As earlier concluded by (Ding, Tang, Deng, Tang, & Posner, 2015), mood plays a role on innovation, and it would not be

unrealistic to assume this also effects the individuals perception of creativity, generally and in the moment. As such, the data collected might be influenced on factors not obtained by the author. The clear tendencies in the data, as presented below, suggest a possibility of this not influencing in this data sample, but without clear data, no definitive conclusion can be drawn.

15.3 ANALYSIS OF CREATIVITY

In this chapter, analysis related to the area of creativity is presented. The chapter is divided in two parts; *Creativity Training on Perceived Creativity* and *Other Findings*. In the first part, findings related to the individuals perceived level of creativity is presented, in the second part, other possible findings and structures are presented.

15.3.1 Creativity Training on Perceived Creativity

15.3.1.1 The Immediate Positive Effect of Creativity Training

Every single interviewed individual found that their creativity increased during the Creative Genius course. This supports the findings from the literature review, stating that creativity training results in an increase in creativity during and immediately after creativity training. Most interviewees also discuss and increase in understanding of creativity, and an increase in own creative ability. These seems to match the purpose and expectations from the course and the individuals taking the course, and, furthermore, fits with the expected findings in the data.

15.3.1.2 Long-Term Effects of Creativity

When analyzing long term effects of creativity, the differences between group A and group B becomes very clear. Everyone in group A describes their creativity as continuously increasing, whereas group B defines it as either neutral or decreasing compared to during the creativity course, although still higher than before the course. This suggest these possible structures for development of perceived creative level:

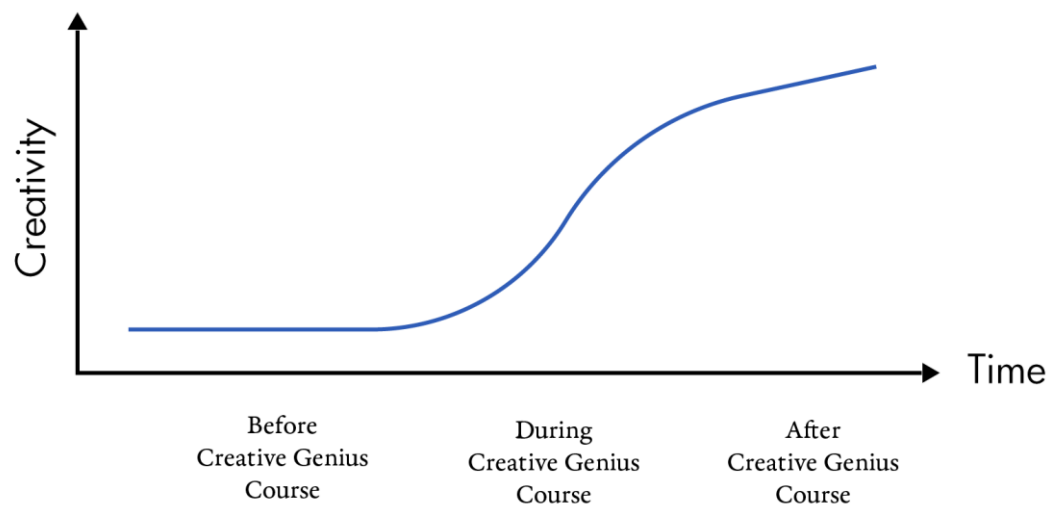


Figure 4: Perception of creativity with positive development

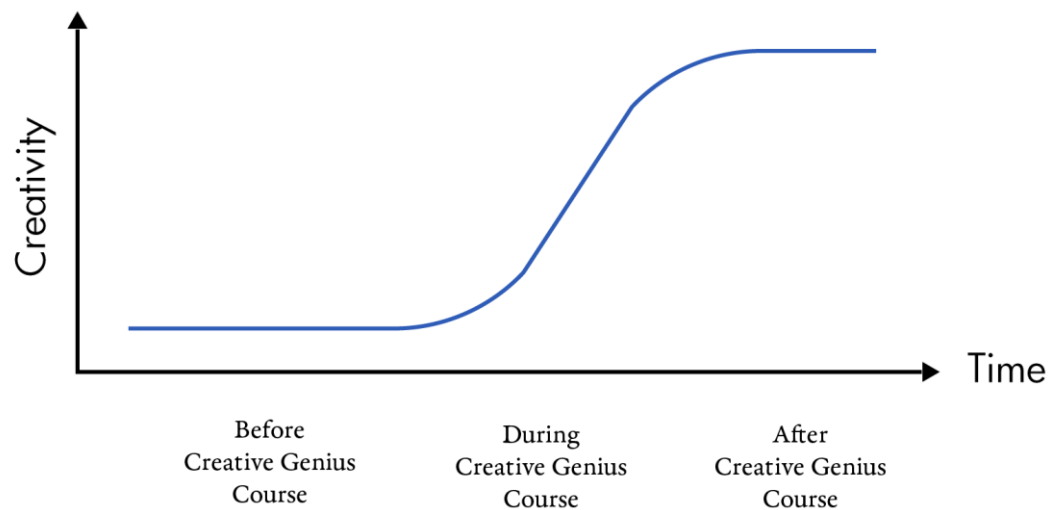


Figure 5: Perception of creativity with neutral development

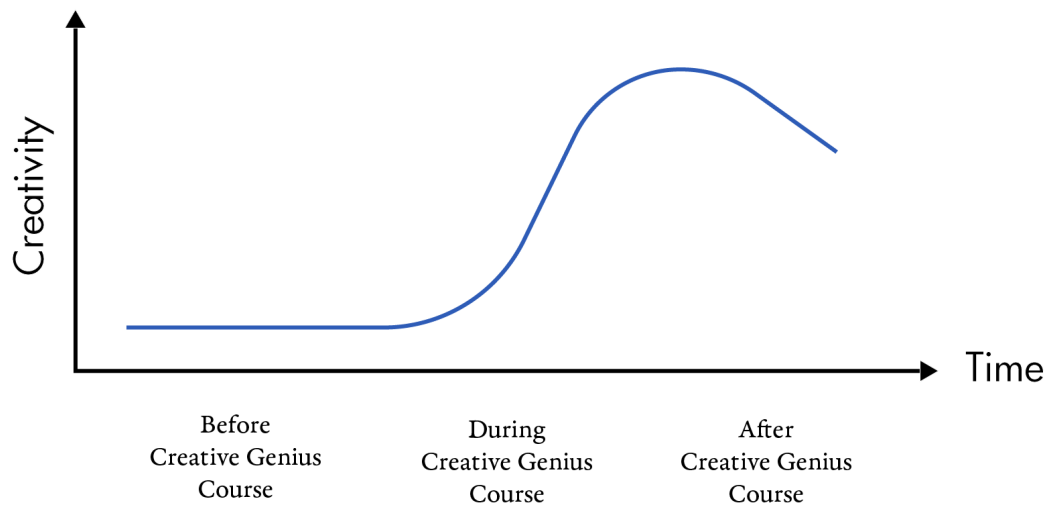


Figure 6: Perception of creativity with negative development

15.3.1.3 The believed reason for this, will be defined in chapter “Effects of Creativity

When looking at the findings of this study, it seems that there are no negative effects of creativity training. Although this should be considered with a certain level of considerations, due to the sample size, the data acquired does suggest a possible structure regarding the positive effects of creativity; that the benefits outweighs the costs of creative training.

In the literature used for the literature review, and in the descriptions of the Creative Genius course, creativity training is focused on the goal of increasing creativity in the individuals taking the courses. In the Creative Genius course, this is further expanded with a goal of understanding the theoretical aspects of creativity.

But, in the analyzed data, the results of the Creative Genius course goes beyond this. The individuals discuss an increased ability in several aspects of their lives and an increased faith in themselves:

“I would say that first, what I experienced with the transformation I went through; I’m faster at getting ideas, and I’m faster at realizing when I’m getting the same ideas. So that means that I much more efficiently can get to some ideas which are

interesting. And that's in regard to being humorous, that's in regard to thinking differently and it's breaking from the frame presented for a problem. So, I'm just a lot faster. Those times where I'm using it, something I'm also doing these days, is if I am sitting with someone, and I know I have to find X number of solutions, or questions to something, Then I'll isolate myself. And then I'll plan with them that we – or at least I – am going to use half an hour to get ideas. And then I know – there's a calm in it – that I will always get the ideas I need to get. And better than that."

This might suggest toward a type of transfer effect, with benefits going beyond areas directly affiliated with creativity. As most described benefits from the interviewees relate to an increased confidence in own abilities, this might be the transfer causing other benefits.

None of the found articles discussing effects of creativity training have considered or suggested towards this, but none have collected data which might show the existence of such a structure either. This suggests that such a structure might exist, and thus possibly that the perceived benefits of creativity training goes beyond what is currently believed.

15.3.1.4 Beliefs on Creativity

A number of interesting structures were found in relation to how creativity was perceived from the interviewed individuals.

First, most of the interviewees differentiated between the Creative Genius course and other university courses, as described here by Subject 2:

"Well [the Creative Genius course] was definitely different than the than the rest. And uh I would say a bit more of what I imagine the university should be. Uh we were going towards uh a digital world so remembering information will not be useful. It already isn't that useful anymore. So, I think it's more important to teach people how to use information instead of having them memorize it."

Secondly, both group A and group B hinted towards a perceived relation between creative ability and ability to think. Individuals from group A evolved on this, and described a clear perception of the relation between creativity and ability to think:

"I think creativity is basically just the way you think, no matter who it is and no matter how it is. It's a very vague description, but that's because I think you can't really specifically define what it is. I mean I think it varies a lot also, but on an individual basis depending on the context of something that's generally thought of as creative like arts and music and whatever, it's not necessarily where your creativity shows the most. And I think it's just mostly to keep an open mind and, in the way, you think about things."

This tacit differentiation seems to support the impact the creativity training have had on many of the subjects. It is believed valuable data, to understand if this impact is a common occurrence of creativity training, which supports the need for further qualitative investigation of the effects of said training.

Analysis of Activation". The individual in group C initially did not consider himself more creative, but through probing it was found that his initial response did not match with his actual experience, and as such he fit with the representation of either figure 4 or figure 5.

Interestingly, despite how the interviewees sees their creative development, each and every one of them found that they have become more focused and performs better in their personal and professional lives. All of the interviewed persons relate this to an increased belief in own abilities – creative and otherwise. Despite the considerations of the data-sample, this seems to suggest a positive structure relating to creativity, in that creativity training have a positive outcome on and individuals creativity and creative ability.

15.3.2 Other Findings

15.3.2.1 Value Recognition

There was no negative emotions towards creativity, from any of the interviewed individuals. Here a number of possible bias should be considered; partly the authors role as a fellow Creative Genius alumni, which might have colored their presentation of creativity, partly the volunteer aspect of the interviews, which might result in solely individuals with a positive emotion toward creativity to volunteer, and finally the positive role of the author during the interviews, which might unfairly have focused the individuals towards a positive presentation. Although these possibilities should be taken in considerations, the findings does show some interesting tendencies. One of these are that there is no differentiation between the positive perception of creativity between the defined groups, suggesting possible underlying structures, despite how individuals later use creativity.

This perception of creativity seems further supported by the fact that every single person in the data sample wished to invest more time in creativity – no matter their current level of investment.

If a structure exists where no one or close to no one perceives the investments of creativity training negatively, considerations should be made regarding why more people are not training their creativity. This question is raised throughout the data collection process, with a number of individuals vocalizing their belief that everyone should be trained in creativity:

“And I think it was it was a very good experience to have. Yeah. And I think in a sense I think it should be kind of mandatory for everyone. Yeah. It's just it's really helpful. I mean among other things there are a lot of topics that are very interesting. But this is kind of in the background of everything.” (Subject 4, 2019)

15.3.2.2 Creative Process

Almost every interviewed individual differentiated between the process thought at the Creative Genius course, and the process they now used. Often, this selective process was used as a method of activation. Mostly, they referred to a certain level of individual selection, meaning that they would use the parts of the process they found as the most giving, and ignore the parts they did not.

In practice this suggests that although all of the interviewed individuals received the same (or close to) education, the perceived benefits have varied, resulting in different personal understandings of the creative process. Without more data, it is hard to understand why this have occurred, but one could surmise that it is a natural development of any skill, to shape it to match own preferences. This might suggest, that any creativity training which does not cover a broad area of creative processes, could results in fewer individuals engaging in activations, as they do not get introduced to an activation of their preference. In return, this might result in a reduced long-term effect of creativity training for that individual. Several of the studies conducted in the literature review, have focused on only parts of creative training, under the belief that any training results in an equal increase. But, if the later occurring activation depends on individuals being thought processes which matches with the preference (as this data suggests), then by selecting only certain topics or areas for training, some individuals might miss out of long-term benefits, and thus result in long-term overall creativity level to decrease.

The sole individual whom still followed the creative process as presented, was also the individual whom most recently finished this course; Subject 7. She had been an alumnus for less than half a year. She described that she had yet to find her own creative process, suggesting that the individualized creative process, might be a result of either lack in comfort with own process, or a natural occurrence over time:

"I think it was when [the teachers at the course] told us of their creative methods. It sounds so easy to actually find your Creative methods, like so simple when you finally found it. But it's when... I thoughts in the beginning that it's really easy and I just have to try a few things out. And then I tried a few things out, but it was like still I'm actually not sure; am I more creative or am I not." (Subject 7, 2019)

15.3.2.3 Effects of Creativity

When looking at the findings of this study, it seems that there are no negative effects of creativity training. Although this should be considered with a certain level of considerations, due to the sample

size, the data acquired does suggest a possible structure regarding the positive effects of creativity; that the benefits outweighs the costs of creative training.

In the literature used for the literature review, and in the descriptions of the Creative Genius course, creativity training is focused on the goal of increasing creativity in the individuals taking the courses. In the Creative Genius course, this is further expanded with a goal of understanding the theoretical aspects of creativity.

But, in the analyzed data, the results of the Creative Genius course goes beyond this. The individuals discuss an increased ability in several aspects of their lives and an increased faith in themselves:

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This might suggest toward a type of transfer effect, with benefits going beyond areas directly affiliated with creativity. As most described benefits from the interviewees relate to an increased confidence in own abilities, this might be the transfer causing other benefits.

None of the found articles discussing effects of creativity training have considered or suggested towards this, but none have collected data which might show the existence of such a structure either. This suggests that such a structure might exist, and thus possibly that the perceived benefits of creativity training goes beyond what is currently believed.

15.3.2.4 Beliefs on Creativity

A number of interesting structures were found in relation to how creativity was perceived from the interviewed individuals.

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Secondly, both group A and group B hinted towards a perceived relation between creative ability and ability to think. Individuals from group A evolved on this, and described a clear perception of the relation between creativity and ability to think:

“I think creativity is basically just the way you think, no matter who it is and no matter how it is. It's a very vague description, but that's because I think you can't really specifically define what it is. I mean I think it varies a lot also, but on an individual basis depending on the context of something that's generally thought of as creative like arts and music and whatever, it's not necessarily where your creativity shows the most. And I think it's just mostly to keep an open mind and, in the way, you think about things.” (Subject 3, 2019)

This tacit differentiation seems to support the impact the creativity training have had on many of the subjects. It is believed valuable data, to understand if this impact is a common occurrence of creativity training, which supports the need for further qualitative investigation of the effects of said training.

15.4 ANALYSIS OF ACTIVATION

This sub-chapter is devoted to describe structures found relating to the area of activation. The first part describes findings related to how individuals use and perceive activation. The second part describes how this work is unable to define what constitutes activation.

15.4.1 General Tendencies

15.4.1.1 Beliefs on Activation

Interestingly, there is a number of common understandings among the interviewed individuals, which suggests an interesting tacit believe regarding activation, despite the fact that none of the individuals had ever heard about the concept of activation before.

It became clear when asking the individuals to describe their creative process, that every one of them used activation. When probed, most of them described activation, as a method of reaching a creative mindset:

“I think doing things like those, it helps get you into a mindset where you have to think of different things in quick succession, without considering pros and cons of them too much. And it allows you to have a greater idea base for later if you need it. And I think the warmups help sort of... Well like you warm up for physical exercise then it's the same thing with your head. You get yourself in the right headspace, then it's easier to do.” (Subject 3, 2019)

This suggests a possible tacit understanding in creative individuals, for using activation, a theory which is not presented in any found research currently.

The positive effects of activation was supported outside of the believes of the interviewees; when asked about whether they felt more creative at some points over others, all individuals answered positive, and when asked to elaborate, many mentioned moods as playing a factor:

“Generally speaking, I think your mood would influence it a lot. Like if you're in a good mood then you're probably more accepting of whatever comes to you and if you're in a bad mood you tend to be more critical of ourselves or some generally your mood would affect it a lot and also your company depending on what kind of people you spend time with.” (Subject 3, 2019)

This is confirmed by (Ding, Tang, Deng, Tang, & Posner, 2015), and earlier in this study assumed to fit within the area of activations.

As the individuals saw a relation between activation and creative ability, it often became unclear when referring to factors inhibiting their creativity, whether they considered not doing them decreasing or doing them increasing. As the practical result seems to be the same, the distinction became irrelevant.

Other factors, which are deemed non-activation, based on the definitions set for this work were also mentioned to play a role on creative ability and creativity, such as physical needs, deadlines and other people involved in the task.

15.4.1.2 Activation as Training

Interestingly, a number of individuals compared the ability to be creative, with physical training:

“Most people think about creativity as, I don't know, genius or a spark or something unique but... All right. I used to do that too. But after taking the class I understood that it can be trained, it can be worked on. Same as with athletes. There are athletes who have talent, but with talent only, they only make it so far. You have to work for it. You have to train. So, if we think that the brain is a muscle so to speak then why not train it. So, yeah creativity is definitely a skill that can be trained and creativity is... It's what makes us human. Creativity is what makes the difference between artificial intelligence and human intelligence. Computers might be able to think faster than us, but for now, at least, they aren't able to create something no matter how or

how fast they think. So it's not about brain power. It's something else.” (Subject 2, 2019)

This tendency is mirrored in the belief behold by everyone interviewed, that if not maintained, creative ability will decrease – something matching with the hypothesis of this paper.

15.4.1.3 Use of Activation

Although people’s perceptions of creativity seems to be very similar, when analyzing whether or not people use activation in non-creative specific contexts, the results differ. The people in group A describes a use of activation often, separated from a creative context, like in this example, where Subject 4 describes using meditation daily, and using meditation for creativity as two separate instances:

“Sometimes I use it. I haven't done it in last week I was on vacation and I didn't really need it. But when I'm with home I always meditate in the morning. Right after have either before or after breakfast. Depends how I feel. And whenever I work on something and my head becomes... I mean I've used it in a conscious way for creativity.” (Subject 4, 2019)

Interestingly, several persons in group B, also uses activation often, but, when comparing their described levels of activation to before the Creative Genius course, there is no to little difference. This seems like a logical assumption when considering the undefined variable of creativity in this work; at no point is the comparative levels of creativity considered outside of the individual. With other words, to experience an increase in creativity, the level of activation needs to be higher than the start-point, otherwise no to little increase might occur. This area is to some degree discussed in Byrne and Thatchenkery (2019) whom suggests that the positive benefit from activation can be stacked, but does not discuss a limit of this. This finding suggests that activation might only be increasing to a limit.

Also the individual in group C, seems to not use activation as described, instead he refers to perceived benefits from having time to follow hobbies. Although there is found no evidence for a correlation between these two, it could be argued that this could affect mood – which in turn does effect creativity. This is an example where the lacking knowledge of activation hinders the understanding of reality.

15.4.1 Activation Types

Another aim of this study was to define what constitutes activation to a further degree than previously done. However, there is not enough data collected to do this, especially as the method of this paper seems to result in mainly positive correlations. Without negative correlations, the issue described earlier; that everything could be an activation, occurs. As such, this research recommends this as an area for further study.

15.5 THE RELATIONSHIP BETWEEN FINDINGS

15.5.1 Activation and Creativity

As initially suspected in this paper, there seems to be a strong correlation between creativity and activation. The findings shows two main tendencies; that of group A, where the individuals use activation more often than they did before the course, and as a consequence find that their creative level are higher than before and during the course, and that of group B, who does not use activation to the same degree and consequently finds that their activation is decreasing after the course. This finding matches the assumed results throughout the initial work of this paper.

This suggests that a number of the issues raised earlier in this work, regarding the findings of earlier research, holds true. If researching creativity levels, in other than theoretical terms, the levels found directly after the course, might not mirror the long-term levels of creativity. As such, these findings suggests that either long-term tests need to be conducted, and that the assumption drawn in creativity literature of creativity as a static size after training, needs to be re-adjusted.

In practice, this might often not have a consequence, as individuals whom are expected to work creatively might tacitly activate their creativity, and thus ensuring an increase in creative level. But in an organization hoping to reap the benefit of creative training, the knowledge of activation might make the difference between solely short-term benefits and long-term benefits.

15.5.1.1 The Unclear Correlation

With the individual from group C, the correlation between activation and creativity are not clear. None of the given data suggests that he performs a significant amount of activation, and yet he describes his creativity to be steady. This could be due to something as simple as flaws in the data collection process, or that he performs an unknown method of activation. But, it might also suggest that there exists other factors touching the structures of the creativity-activation correlation. Without further data, this cannot be defined.

15.6 OTHER FINDINGS

15.6.1 Creativity Training

This paper re-confirms findings already presented in the literature; that creativity training works, also long-term. However, as defined in the analysis, *how much* it works is dependent on whether the individual participant have an increase in activation activities after the course or not. This gives nuances to the existing literature, especially literature which calculates in specific units the benefits on creativity of creative training. As such, the dependent variable of activation, needs to be considered when measuring creativity levels. Furthermore, it can be surmised that different types of creativity training might encourage activation differently, something which should be considered when choosing a method of creative training.

Karwowski (2015) also states that perception of own creativity can play a role on creativity. This becomes a question of which comes first, ability or faith in said ability, but nevertheless, the influence on creativity training on faith in own ability, is clear in the data. This suggests that the

relationship between creativity and perceived creativity is non-singular, and thus more complex than initially suggested by Karwowski (2015).

This might be worth considering if aiming to research aspects of creativity, as an individual without faith in own ability, might experience reduced creativity, despite creativity training and/or activation.

15.6.1 Understanding How Creativity Training Works

That creativity training works seems to have been proven once again, but this work suggests towards the complex nature of why this is so. In earlier work presented, creativity training is often presented as a somewhat direct method. This work hints towards another reality; the structures underlying creativity is more complex than simply enhancing a part of creativity and expecting a positive outcome, without any other results.

This have especially been seen in the case of the individual in group C. Despite very similar courses, the structures found from his experience varies to a non-insignificant degree from the structures found with the other datasets. This suggests that only slight differences in either creativity training, the purpose of said training or possibly any other number of factors, can change the outcomes of how the participants perceive creativity. However, it is again relevant to mention, that as the data sample of group C is one individual, any suggestions drawn here, needs more data to be confirmed.

Of course the relevance of understanding these structures can be questioned; if we can make it work, is it really needed to understand why? As a researcher and a critical realist, the author of this works believes that understanding the structures which guide our reality, gives us the power and opportunity to influence these, to a higher degree than otherwise. With other words; the more we understands about the structures which governs creativity, the more focused can we make creative training, and as such the better results can we expect for this.

15.6.2 Observed Data

As a critical realist, there is a believe that all data is relevant for understanding structures. As such, considerations were done regarding the researchers perception of interviewees and that perceptions relationship to activation, creativity or other relevant findings.

No clear structures were found in this relationship. This could be due to a number of reasons, including the limited dataset, the limited time and conditions spend with the test-subjects or the researchers personal perception.

One clear structure which were believed to be likely, were interestingly found to not influence the findings. The researcher assumed that the perceived comfort from individuals, when discussing creativity, would reflect in the findings, either in relation to the self-perceived level of creativity, use of activation or other areas. However, no consistent tendency were found.

15.7 THEORY TESTING

Another relevant data collection method used for this study, was involving the interviewed individuals in the theory development process. As a critical realist, this method is believed to be useful to recognize structures outside of the conceptions of single researchers.

However, in this study, the attempts of creating a debate regarding the perceived structures relating to creativity and activation, failed to some degree. This is mostly considered to be due to limitations in the used method, as the first aim was to conduct successful analysis. With only one planned meeting with interviewees, theory testing were attempted to be included within the interview settings, which seems to have resulted in a lack of the aimed debate.

However, despite the lack of constructive debate, some data were collected as a result of introducing individuals to the research parameters and assumed structures. Predominantly in form of interviewees positively recognizing the assumed structures, suggesting that at least for individuals with a higher-than-average understanding of creativity, the idea of activation influencing creativity is perceived as valid.

15.8 THE IMPACT ON INNOVATION

This study suggests a clear link between creativity level in the individual and activation. However, when translated to an innovation perspective, does these findings matter? Yes, this might result in a change in perception of creativity theory. Yes, the methods researchers tests the effect of creativity training might need to include further aspects. Yes, creativity training might have a greater influence on the individual than so far believed. But does this effect innovation?

This research will argue that it does. The benefits of creativity in organizations is well documented (Tidd & Bessant, 2013), and this work begins the research toward giving companies specific tools of increasing creativity amongst employees, either by training them or by activating creativity.

This work would argue, that for the best benefits companies should do both. The benefits of increasing creativity among employees, could not only lead to increased problem-solving and opportunity-finding, but as this work suggest, the transfer from creativity training might increase employees non-creative skills and level of self-worth – something which will not only increase productivity, but which might also increase the psychological well-being of the individual employee.

16 CONCLUSION

This work clearly suggests that there exists a link between perceived creativity and activation. This work have found evidence of structures defining the development of creativity in individuals after creativity courses. This development seems to be highly dependent on how individuals utilize activation after receiving creativity training.

This work found two main tendencies. The first tendency is found in the group defined as group A in this work. This group increased their use of activations after receiving creativity training, and seemingly as a consequence, their perceived creativity level continued to increase after the course-ending. The other main group, defined in this work as group B, did not increase the use of activations after the course, and, seemingly as a consequence, experienced either no change or a decrease in their perceived creativity level after the course.

These findings suggest that a positive relationship exists between perceived creativity level and activations.

This suggests that the method mainly found used to measure creativity in the literature review of this work, does not collect all relevant data; by not considering the long-term effect of activation on creativity, conclusions of effect of creativity training on individuals, gives only a short-term image of the reality.

17 FUTURE RESEARCH

As this work is an explorative study, it is inherent that the main aim is not to definitively conclude about existing or non-existing structures, but rather to clarify possibilities in areas which should be further researched. The main research of this study suggests that there might exist a relationship between creativity and activation, something which might have impact on how we perceive creativity and creativity training. As such, this work strongly implore that a long-term study is conducted, to understand whether this finding is correct, and to understand how this impacts research and everyone benefitting from creativity, from the individual to organizations and businesses.

Here this study suggests a long-term triangulated study, following and testing test-subjects before, during and after a creativity course, aiming to gain data on measured creativity, perceived creativity and the use and impact of activation, to understand the structures guarding these areas.

This study also found a number of other relevant topics.

It became clear that the area of activation is severely undefined, and furthermore that a qualitative study might not be the method of defining what constitutes activation vs what does not. Here this work will implore this area to be researched initially in a clinical setting, as there seems to be an undefined number of areas playing a role in the data for this.

Also the considerations on why some individuals begins to use activation regularly, while others do not, could be an interesting area of research. As discussed, this might also relate to the differences is creativity courses, and how these impacts creativity and activation in the long-term; an area which could and should be researched in itself.

As this study was the first qualitative study found regarding the effects of long-term creativity training, it is implored that further testing is done; especially considering the interesting results regarding the impact creativity training have had on the individual and their lives. This also covers the interesting believe held from many of the participants, regarding their perception of creativity as related to general cognitive abilities. Here qualitative information from persons surrounding the individuals whom can judge at changes in how the test-subjects relate to reality would be specifically interesting.

As all the individuals interviewed for this work, experienced a self-defined positive effect, these impacts should be considered, including the possible influence of creativity training on a broader setting; a wish spoken by a number of the interviewed individuals.

As all the data gathered had a positive focus, research into negative effects of creativity training or activation might increase the understanding of structures governing these areas.

18 LIMITATIONS

As mentioned throughout this work, a number of limitations influenced the findings. First and foremost, the singular data-focus, limiting the option of performing triangulation. This reduces the validity of findings, and increases the need for further research.

As this research was the presumed first qualitative study of long-term effects of creativity training, a major part of the method utilized is based on assumptions, including the correctness of after-the-fact self-defined creativity levels. These assumptions, although theoretically sound, could in practicality be incorrect, and as such leads parts of this study to be incorrect too.

In the literature review process, a number of articles were excluded in the early parts, based on among other citations. This was done partly to ensure validity, and to limit the manual search-area to a realistic process within the limitations of a university thesis. As such it is possible that valid and relevant data was excluded. This concern also transfers to the decision of not including further articles referring to any specific type of activation, in the additional literature searches.

Lastly, practical limitations governing university thesis might have influenced the structures of this work, and thus limited the research conducted.

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21 APPENDIXES

APPENDIX I: INTERVIEW INVITATION

Dear Creative Genius alumni.

My name is Nicola Jensen, and I am currently writing my thesis project regarding creativity, under the supervision of Christian Byrge.

In that regard, I would appreciate the opportunity to interview a number of you. The interview will take approximately 15-30 minutes, and can be in person (in or around Aalborg), or by phone or skype, depending on your preferences. I will ask questions regarding how the Creative Genius Course changed how you use and see creativity.

The interview will be anonymous.

Please contact me here, or on email nimana@hotmail.com if you are interested.

With hopes of hearing from you,

Nicola Jensen.

APPENDIX II: INTERVIEW GUIDE

About the Creative Genius Course

Purpose: How does the individual describe the creativity course

- a. Meta question: How did the individual perceive the creativity course
- b. Meta question: How did your life change with the course

Further training

Purpose: To ensure that these individuals have not perceived further creativity training

- a. Meta question: Have the individual received further training?

About creativity - general

Purpose: To understand how the individual perceive creativity.

- a. Meta question: How does the interviewed perceive creativity generally?
- b. Meta question: How do they measure creativity?

About the individual's creativity

Purpose: To understand the individuals creativity.

- a. Meta question: How does the interviewed perceive their own creativity?
- b. Meta question: How does the individual express their own creativity?
- c. Meta question: When does the individual use own creativity?

Development of creativity

Purpose: How does the individual perceive the development of own creativity and the fluency of creativity as a concept

- b. Meta question: How does the interviewed individual perceive their creativity before the course, during the course, immediately after the course, and now?
- c. Meta question: How does the interview person perceive their future creativity?
- d. Meta question: What does the individual perceive the fluency of creativity?
- e. Meta question: Is everybody equally creative, and equally likely to learn?

Activation

Purpose: How does the individual understand and use activation?

- f. Meta question: Does the individual recognize the concept of activating creativity?
- g. Meta question: Does the individual utilize activation?
- h. Meta question: If yes, how does the individual utilize activation?
- i. Meta question: How does the individual perceive that activation influences the individual's creativity?

APPENDIX III: INTERVIEW MARTIN HANSEN (TEST INTERVIEW)

Nicola: All right we're ready to start them. Could you kind of can you start off by describing yourself. where do you work and when do you take the Creative Genius course?

Martin: Well. Currently I'm unemployed but working temporarily as an intern through the you know job Center I took the Creative Genius in my ninth semester, so it must have been in 2016.

Nicola: All right. Why did you choose the Creative Genius course?

Martin: it was actually a bit of a random streak, I was not sure what I wanted to do with my 9th semester project or my 9th semester, I looked into a bit of opportunities abroad but wasn't that into leaving the country, then I walked by Creative Genius and walked around their classroom a few times and it sounded like what they were doing in there was quite interesting, so I tried signing up and got in

Nicola: alright, how did you like the course.

Martin: I was quite happy with the course, it was very fun and very interesting, I think compared to my other semesters at the university it was the one where I had the most fun, and at the same time I learned a lot of interesting things.

Nicola: what did you learn?

Martin: what I remember today, and you know I've forgotten most of my studies, but I learned how the brain works and how you can force yourself on getting new ideas, and how you can focus on when you have gotten your new ideas or when you try to develop them. Whether or not you want as many categories as possible or as in depth as possible. And the I remember a lot about the focus on not shooting down ideas but just working with them and see where it goes.

Nicola: alright, what did you learn, how do you do those things you describe?

Martin: In my every day or what I was taught back then, what is the question

Nicola: how do you do it in your everyday life now?

Martin: well in my everyday now I often, if I come across something where I feel like I am lacking an idea or I try to develop something, then I often return to the idea cards we have, but since I do not

carry those around with me then I just search around the vicinity, and just figure out which words comes to my mind, like how would a chemist solve this or how would you solve it if you had to use a shoe, like that, so forcing a specific stimuli in my brain to get different ideas, is one of the things I do a lot, when I work in a group I try to implement the point to not shoot down ideas, and go for the quantity of ideas as ideas often become better and more original the more ideas you make, so if you go for quantity over quality in the start of the idea generation, I feel that that helps a lot

Nicola: when you work in a group setting, do you get your colleagues to use the same mentality, the picture cards or objects in the vicinity?

Martin: that depends a lot, if you work in a group setting where you have the time to explain the value as well as how to do it, and it requires a lot of trust, then it is something I could work with, but generally speaking I do not try to facilitate, because it takes some time to get people in to the mindset, and people need to be willing to step into it, and if they do not have that then I normally just stick to using it myself

Nicola: you said, if you have the time to explain the value, can you explain the value?

Martin: well the value of e.g. of not shooting down ideas and getting more ideas, is that you will not just get the basic ideas which are straight forward, you will also get a lot of weird ideas, which will be a lot of poor quality ideas, but amongst those might be hidden some very good one, but if you do not have the time to explain that, then after 5 bad ideas people will be like “this is going nowhere” and then you need the time to explain, it is just going very different than you are used to, but in the end we will get results.

Nicola: is it the same with using objects or picture cards

Martin: well it is the same with most of the creative concept we were working with because it is much different than what companies are used to. Where you censor yourself before you say your idea out loud to see whether or not it is possible, and when you do that, you will have less ideas on the table, and someone might hide an idea that someone else will see value in

Nicola: do you think that this mentality, being able to do this, was that something you learned at the Creative Genius course?

Martin: sorry I do not understand?

Nicola: the ability to go down a path and testing new ideas, this was something you learned at Creative Genius?

Martin: well I have always liked the idea of discussing things and I don't mind getting of tract and getting in depth, but I learned at CREATIVE GENIUS to see that value and use it as a tool, and not just to play around, to use it, not just as a side effect of a conversation, but as the actual goal, we want to develop the conversation this way

Nicola: I am going to backtrack a bit; can you describe creativity for me?

Martin: describe creativity? As the term, or how I see it or?

Nicola: either one, the concept of it, how do you perceive it, what is creativity for you?

Martin: the ability to get more different ways of looking at stuff, so instead of staying on the same narrow path, the concept is to help open your mind in different directions – compared to before I did CREATIVE GENIUS, forcing you brain to think out of the box and picking out what you can use to get new ideas. So I guess for me it is quantity of ideas as a quality in itself, you need many ideas to get good ideas.

Nicola: can you describe situations in your life now, can you describe a point where you use this getting more ideas as a purpose for getting more ideas?

Martin: well at my job we are working on international expansion, they want current products in the German market, the German market is 4 times bigger than our current market, so it is very interesting to see how to get in there. But the German market is different in the way of using marketing, so how do you as best possible, get your product known by the business' we want to use our products and what is the cost of doing that, and in that case you have to generate ideas of how to market in Germany, and of course the natural, emails and letters, but are there different ways to get into contact or are there different important people, e.g. you tweak the parameters, e.g. you exclude something, excluding all forms or picture media, no web page no catalogue, how would we then contact them, that is one way, by exclusion of current methods, how can you force your brain to come up with different ideas? As an example

Nicola: that was something that you introduced to your job?

Martin: sorry what?

Nicola: that was a method you introduced at your job?

Martin: yes

Nicola: after learning it at CREATIVE GENIUS

Martin: yes

Nicola: are there any other situations where you use creativity other than your job

Martin: if I encounter something where I feel I lack an idea, then I often use it, other than that I use it around children, since children are more open to the more whimsical way of creativity where grownups are kind of laughing, and you need to talk them into the concept, where children if you start a fairytale and take turns at making sentences they are just in, and if you alter the rules to get them to think differently, then they just follow, so I use it often to both entertain and to stimulate creativity in children around me

Nicola: do you think the Creative Genius course made you more creative

Martin: yes?

Nicola: how?

Martin: as in some of the examples I gave, then I use creativity to solve problems around me, but also just if you take a walk, then from time to time my mind wanders to combining to random things just to see what ideas I come up with, and it has become more natural to me to come up with more stupid ideas, not that I was that limited before, but now it is not just fun but actually has a purpose, so you know, making ideas is not just goofing around, but sort of exercise

Nicola: do you find that it is important to do these exercises? What does it do for you?

Martin: well I don't do the exercises nearly as often as I think it would be a good ideas, but I think as it is with much other training, and stuff you do, it is important to keep the ability, and I think being creative is not much different than doing math, and the math I learned in high school, I cannot do today because I have not kept the skills up, and the same goes for creativity, I am probably better

than before CREATIVE GENIUS, but since I have not kept the ability sharp, then I think it will be natural that I have lost some of the skills

Nicola: so you perceive your own creativity lower now than when you did the course

Martin: yes

Nicola: what if you knew in a month you had to do something extremely creative, would you be able to make yourself creative again?

Martin: I guess, without remembering/knowing the science, then I guess it goes like much other training, if you force your brain it will become better, as if I had to do a great sporting event I would start working out, the same thing goes for my brain I guess

Nicola: what would you do, if you had access to anything, would you do the silly games you talked about earlier? Read articles, take a course?

Martin: I would probably go back to the books from the creative course, and look into the things we did back then, but as I remember a good part of being creative is the ability to continue idea generating, even if your brain is feeling empty, so I would probably continue to build up the stamina, right now I think my brain would give up too fast, so I think I would train that, so it would get used to the exhaustion, because I remember from CREATIVE GENIUS that I was exhausted.

Nicola: if you imagine this big creative event was coming at your job, would you be able to teach your skills if you had a month

Martin: within a reasonable level yes, but as with all other teaching, it requires you know, a few things, a good teacher, and a proper understanding of the subject, and I have decent teaching skills, and a decent knowledge on the subject, but I had half a year, years ago, but if I had a week or two to read up then I could do a beginners course, but further than that, I would require help

Nicola: what if you could get a teacher to help you and your colleagues, what would happen then?

Martin: if the teacher is good at teaching then I guess creativity would increase

Nicola: would your colleagues creativity increase as much as yours?

Martin: that's an interesting question, because if they have had no creativity training, which I believe they have not, and I have, would I then gain more from new teaching, or regaining what I have lost, I think we would see the opposite, if we had a teacher then they would become more creative from their starting point, then I would because the first 50 hours or 100 hours is where you learn the most, so I would get a brush up on what I already know, where they would learn from scratch, and therefore get more out of it compared to me

Nicola: do you think everyone can learn creativity?

Martin: I think everyone has a certain amount of creativity given to them through their upbringing and schools and stuff, so we all have a certain level of creativity based on personality and stuff, and I think everyone can improve, but how much depend on a lot of other subjects, because you might be very closed at learning new stuff, or very closed at trying these silly games, and then you would not improve as much, but yes I think everyone can improve

Nicola: do you think if everyone had infinity time and interest in learning, could everyone then become experts in it?

Martin: that is a very philosophical question, I think everyone could improve quite a lot, but there might be caps on how high you can reach, but it can be hard to measure, but I do not think everyone would become equally good no

Nicola: I want to backtrack a bit, I want to talk about what you do, what if your boss comes right now, and say hey I need you to be creative on this, what do you do where do you start?

Martin: I start an idea generation, start of simple and get all the basics out the way, I am not sure that is the right method, but that is how I would probably work, throw all the ideas out your head, and then you use different ways of getting different ideas, different stimuli, different rules, different games, to force your brain into getting something new out of it, if I had to do something in a field where I didn't know much, I would probably rely on getting a colleague in, and then I would need to do some explanation of the process I would like to work with, if I needed him to be creative in the same way. So yes, first into your brain, then different stimuli and then divide them into categories, and then you can either go for more categories, or more in depth, depending on what I'm lacking. And I can't remember the actual technical terms for that. You know all of this is an idea.

Nicola: All of this is sort of the process of coming up with ideas and developing ideas. Is it something else you do that that helps you? Now in the course for example one of our teachers talked about he would go for a walk talk with some cows.

Martin: Well I remember from the point of trying to come up with something new that what you want to do is in that case is to focus on the idea of idea generation as long as I could. And then try to exchange it for something. Manual labor. Doing something where your brain is not super active because this incubation tasks I think we call them but getting them actually done, is not much I do because... yeah, I don't even know why. But. When I was creative I used these things right now. Today though I use some of the concepts that you know seems logical. I guess these things that I know works but I don't use them for some reasons. For example incubation task. The stop and playing games and stuff like that that will probably not happen.

Nicola: Is there days where you feel more creative than others?

Martin: Yes. I think in general...

Nicola: Why do you think that is?

Martin: Well it can be all kinds of different things. But I know that for example – I like the point of plenty of ideas. That goes hand-in-hand with not shooting down ideas. And shooting down ideas as often combined with if you're in a bad mood or something. So if I have a day where I'm just happy for some reason. I am also more creative because I'm more open to stupid ideas than if my mood is bad. Then I'm not really in the mood for trying stuff. I do not feel like you know blowing out my silly ideas. And then you know it comes natural from that. Happiness increases creativity, I think.

Nicola: Is there anything else you think influences your ability to be creative?

Martin: I think I'm influenced by the people around me a lot. Because if the people around me are you know someone were I don't feel comfortable sharing ideas or using this method then I'll have to keep the concept in my head and then try to develop the idea that my head and come out with under the one I think will make sense. Which inhibits the process. So that people around me. Naturally the amount of sleep that I have. But that's mostly because I don't start the process unless I have the energy for it. Well, I think that if you're sleep deprived, you'll come up with some very

different ideas, which might work but I would never actually get around to it if I'm tired. Then the time of day, I guess. I don't think I'm that creative in the morning because again less happy. Yeah.

Nicola: What would you do if you had to make someone else more creative right now.

Martin: [Unknown] You know giving them to work outside their comfort zone but not so much they shut down completely. So it depends very much on the individual person. Because some people are just open and ready and you just you know throw random concepts at them and they will follow. While other people would like, back away so so you need somewhere in between those two. But for the sake of answering I would probably go with something where I would do something like that. Which might be as simple as to just put it in some directions that they would not seek out but not something so farfetched that they will make them you know back off. So in the case of a German markets where I worked with someone not as creative, I would get them to the limits of getting them to think outside the box. But not going for the revolutionary ideas because I think that requires more time.

Nicola: Do you find that when you do this people get more creative.

Martin: Yeah I feel like that if you ask for ideas and put this process on and you encourage the ideas and don't shoot stupid ideas out then you get a good response from that. But. From there on and on and having the entire wall full of stickers is a long step, but also a long process in my mind. But I don't really do much in facilitating so I don't really do much and try to get people to be more creative. I'm just using it for myself.

Nicola: But the concept of it, if you were a facilitator. Could you do these things and make people more creative without having them take a half a year of Creative Genius course?

Martin: Yes I would say so. Getting people to come up with new ideas. And different ideas that they wouldn't without my presence.. Yeah that should be doable. But getting them to... depending on how high you want to increase how much more creative if you could say hey that's what you want people to be because a slight increase or a short-term increase. Would be done - it would be possible by just setting some different rules depending on you know relation to people. But yes it should be possible for sure. Making them permanently more creative will probably take more training from

my side or from anyone else. Because that requires a deeper level of understanding as well. Though training also helps.

Nicola: Can you describe a bit more that this understanding like the difference between you know getting them to do it long term as a short term. How would you define that?

Martin: Oh you can look at it like you know if you go out on a field and you start kicking a football around you will become better at kicking a football very slowly and without any real goal but you know it will be more natural for you to kick a football. If you go out and you spend an hour practicing with a football coach in kicking a football the concept of how a football moves and how to hit it with the foot you will become a lot better in kicking a football and a lot better in the understanding of kicking a football. So that if you never kick a football again five years later come back to kicking your football. You probably be equally bad as you were before but now you have the knowledge behind kicking a football.. The same goes with creativity. If you force people to just come up with new ideas you'll get a short-term increase in their creativity. But if you teach them how the brain works and how to actually utilize the experience. Even if they don't they'll have this tacit understanding, which is easier to reactivate for later than it is to have someone without that and get them to be more creative in the long run.

Nicola: All right, I think that was it. I just want to make sure for my data. Have you received any creativity training after the Creative Genius course you did.

Martin: No.

Nicola: Do you have anything else you would like to add for the interview.

Martin: Well I don't think so.

APPENDIX IX: INTERVIEW SUBJECT 1

Nicola: Can I convince you to tell me something about yourself?

Subject 1: Yes, I'm 30 years old, have two children, live here in Aalborg. I studied Civil Engineering in the area of health engineering. And I took my ninth semester – or my third master semester – on Creative Genius, where I worked with creativity generally, creativity and facilitation of others creativity. Then since I finished, I've worked with creating my own company of facilitating creativity in other people. I've worked with competence increasing facilitation of creativity, and competences. And later I have made my own development-training, for personal growth. These 8 days sessions over maybe 8 days. 8 times a whole day, where it's creativity bundled with therapy, and helping people finding the core values, and who they are as humans. Help them make small projects in their own behavior, so they can break their own patterns and grow some more, as organized humans.

Nicola: Can you tell me some more about the creativity they learn during that course?

Subject 1: Yes, the mainly learn three things. That is, mainly, to be able to get a lot of ideas, get different ideas, and get original ideas. Those three elements. And on top of that, then it's really important that they learn to open in relation to each other, learn to be more honest to each other – and more honest generally, and that's in regard to own values, and the second thing is to be able to act authentically. Authentic off who they are, so they have a behavior, which is as mask-free as possible. That's central. And to be able to do that, it's important that they become good at breaking the structures that they see for themselves.

Nicola: What kind of techniques do you use for the first part; to get people to get a lot of ideas and so on?

Subject 1: To make people have many ideas?

Nicola: Yes, the creativity part of it.

Subject 1: Exercises which are not about making people feel good about each other – nah, it's all related – well, I would use something like idea generating based on some new thing people have to create. It might also be working with abstraction levels, that works really well. Often, I experience that if you are asked the same question a lot of times, then the more time put aside for it, the more frustrating does it get for the person who are taking part, but there are better ideas in the end. So,

what I talk a lot about with mine, is that you have to have faith in the process, and have faith in the time it takes. And then they realize -that's usually after three-four hours, that it's actually pretty funny to keep going, and that you can way more that you believe.

Nicola: How do you experience – so, it's something they learn to utilize for later or how? Or is it only in the situation where you facilitate them?

Subject 1: Sorry?

Nicola: Is this some tools you teach them for later, too, or is it only in the situation?

Subject 1: The way I see it. They learn – I focus on increasing their creative competences, and then I want that later they can be the catalysts to do it themselves. Mainly, it's about them just getting facilitated through a process, to change some habits – very, very important – change some habits and have a positive experience with creating. That's important. And then later. I think they say for creativity, and what I learned with Creative Genius, within six sessions of one hour, with creative increasing activities, then you will be able to measure a difference in a person's creative cut.

Nicola: Is that something you have researched, or is that generally?

Subject 1: That's from scientific experiences.

Nicola: Okay.

Subject 1: So, then there's a behavioral change in how you think. So that's where I want to go – and the just a lot more.

Nicola: What do you mean with a lot more?

Subject 1: Well, you can improve a bit, you can also approve a lot. I want the people who participate in my sessions, they understand how and when to be creative, and how and when they can be what they learned at the university. So, it's sort of like being good at using two sides of the same case, two ways of handling things.

Nicola: So, you don't consider those the same? What people learn at the university and -

Subject 1: No absolutely not.

Nicola: Can you explain the difference?

Subject 1: Well, one is acting based on a predictable rational thought-process, where there's proven methods on how to move from A to B, and that creates a security. So, it's way more secure, there's way more securities based on it. When you say A you also say B. With creativity, there's also a proper method, where you get more ideas, but if we say we are looking for this original – something special, then it's way more based on randomness. And that's majorly different from the methods learnt on the university. Majorly different. With one, you know that if you do that, then that will happen, based on earlier experiences. And the other is based from randomness, and in a greater regard the time you put aside for it. So, it's two different types of processes.

Nicola: Did you find it hard, back then? Did you learn it for the first time at the Creative Genius course?

Subject 1: Yes. I did not have a hard time with it.

Nicola: Can you tell me some more about your experience at the Creative Genius course?

Subject 1: Yes, it was really fun. Really, really fun. It was so fun to play, and increase skills in those things. And I became seriously better pretty fast. I think it matches my personal profile pretty well in regard to my behavior. And that's also why I find it so interesting to go for that.

Nicola: What difference do you see, between what you are doing, and what Creative Genius did? Except, of course, that Creative Genius is half a year.

Subject 1: I would risk the statement that mine is more practically aimed than theirs. So, there's less theory, less explaining. Mine – I did not mention this yet, mine also takes inspiration from myths and religion, where we use that to explain some phenomenon's we experience when we meet resistance. It's a lot more – no not a lot – it's more a concentrated therapy session, more than you get served a lot of theory. It's not that there was a lot of theory on Creative Genius, but more than what I make.

Nicola: If you should take your course, which is a lot more practically focused, over the Creative Genius course, what would the outcome have been? Would you be equally creative today?

Subject 1: If I took mine instead of the other? Yes, I definitely think that. Definitely, because, no matter whether you know what happens behind the façade, when we work with creativity, know

what is happening with your development, then you'll still go through these – it's very practically on Creative Genius, so you would go through these specific behaviors, and they will be part of you over time. So that part, is a lot the same.

Nicola: Do you think they will disappear over time too?

Subject 1: Yes and no. With these things, what I experience, is that the more you have other needs holding you back – that might be that you have some idea about a direction you want to go in, it might be some other thing limiting you. And until you have found this thing, that limits you, then it's hard to be creative where you want to be. Does that make sense?

Nicola: I believe so. I'm going to backtrack a bit. Can you tell me about your creative development? You said it started on Creative Genius, what happened then, in regard to your creativity? I assume that when you finished Creative Genius, you were more creative than before. What did you do after, then? You wanted to work with it; did you train more or just start?

Subject 1: I started making projects. I had the idea that families, especially with bigger children above eight or nine years, they should go the whole family, and then participate in creativity training as a family activity. Because it's fun, everyone gets challenged, and it's something new every time. So, I tried to go for that. I tried starting that. And I did around 12 sessions in DGI Nordkraft, in around a month – I did it different places, and I had a hard time with it. And I had a hard time with it. I ran some longer sessions. The first time I did it, there was a lot of people. Almost – I think it was 36 persons participating. And some kids. And then it was as if I did not handle the marketing part very well. Then I ran six more sessions, and there was fewer and fewer participants. It wasn't that people did not have fun, it was rather that people – they did not have the background knowledge, to understand and see their own improvement, within their creative ability. Even though that was what I explained, then I did not do it well enough. And I don't think I succeeded in creating something which was concrete and measurable from session to session. And there everyone is pretty short-minded, in relation to why we do things. We want to see results quickly. And then I tried starting up a consultant business, tried to go make creativity activities in organizations, and have been four, five, six different places. Nothing recurring – and that's probably also from the same reason, that I didn't succeed in creating a package with short-term improvements in these companies. And this then evolved further to this idea – I call it Visionærfabrikken [The visionary fabric], these one-day

sessions over six weeks or eight weeks, with way longer sessions, because I figured that that makes sense – that if you really should move in this area, you have to spend the time on it. Not only an hour, but at least six hours in a day, being focused in a process. And that resulted in me having almost the same people participating every time. And that was really amazing. Really amazing.

Nicola: When you are facilitating this, are you also participating in the creative process?

Subject 1: That depends a lot on the number of participants. But I prefer not to participate. I think it disturbs. It disturbs my own process to. I tend to get a lot of ideas, before deciding what to include in the process, and then when it starts, I organize. The order, and improvisations and change it around. So that's also my creative process, when I'm facilitating.

Nicola: Do you then use your creative process yourself? One thing is facilitating for others, but do you use it yourself too?

Subject 1: Not as much as I would like to. In my case, that's because there's an economic limitation, as I don't have a job, which means I have to direct my focus elsewhere. And I don't think that's very interesting.

Nicola: Can you come up with an every-day example, where you would use your creativity, if you had the mental surplus?

Subject 1: I would say that first, what I experienced with the transformation I went through; I'm faster at getting ideas, and I'm faster at realizing when I'm getting the same ideas. So that means that I much more efficiently can get to some ideas which are interesting. And that's in regard to being humorous, that's in regard to thinking differently and it's breaking from the frame presented for a problem. So, I'm just a lot faster. Those times where I'm using it, something I'm also doing these days, is if I am sitting with someone, and I know I have to find X number of solutions, or questions to something, Then I'll isolate myself. And then I'll plan with them that we – or at least I – am going to use half an hour to get ideas. And then I know – there's a calm in it – that I will always get the ideas I need to get. And better than that.

Nicola: What do you do in the process? All practically?

Subject 1: I take block of paper, and then I leave.

Nicola: You are not using any of the tools we learned at Creative Genius?

Subject 1: Nah, but sometimes I use some of the techniques – I look around, and I find principles for things. So that's pretty automatic. But I'm not doing it directly – it's more of a reflex, I think. And then sometimes I use – there's that exercise, where you imagine you are standing in your kitchen, then you open a drawer; what's the first you see? Then use that as a stimulus to get an idea. So, I use that sometimes. Other times it's what I think people are thinking, what's written in a book in a random page or whatever.

Nicola: Do they work, the techniques?

Subject 1: Yes

Nicola: Have you used these techniques when teaching others?

Subject 1: Yes. Very actively. I want it to be – I have experienced that I use them to such a degree that I don't need to use them as much as someone who haven't trained. So, it's more automatic. I want the same for the participants. And there I use those tools. Very directly. I use the cards, I use different techniques, I use provocations, all to break frames. It's all – I do.

Nicola: How do you imagine, then, that these people who are a part of this process, that their creativity is changing? One would imagine that their creativity is increasing during the process, as you are facilitating them, but what about after? Is their creativity higher than it was before?

Subject 1: I haven't measured that, so, I don't know.

Nicola: Based on your guess?

Subject 1: Then definitely. I hear a lot of stories... One person who participated, she told me, that she has to make a logo for a costumer, and now she just books two hours in her calendar, go to a café and wait. And then she knows it will arrive.

Nicola: So, she uses the same tools to get –

Subject 1: Yes. And that's a giant plus for her. She was stressed about her work. Now she can just do this. And feel good about it. All calm in her stomach. Especially in an area which requires to create a lot. Visionally. Even though she's a drawer, then she didn't have that tool before. So that's a

calmness for her. And I experience that these tools that I use. When I talk about them, when I talk with them after, that they understand to use them. So, I'm not saying – there might be space for improvement when I teach them this, in a way where that could increase the benefits, but I definitely experience that they improve. No doubt about it.

Nicola: What about the rest of the time – for you too. One thing is when you place yourself in the situation, and in the process and use some tools. What about the rest of the time? How do you experience your creativity then?

Subject 1: My creativity?

Nicola: Well, we can start with the people who take your course. Do you have a feeling about their creativity? Is it bigger than before?

Subject 1: Yes, I experience that.

Nicola: And what about your own, then? From before after Creative Genius?

Subject 1: Yes. A lot. Crazy much.

Nicola: How is that shown?

Subject 1: How is it shown?

Nicola: Yes, what it is that makes you consider yourself more creative?

Subject 1: That might be that... The thing with creativity, at least in my experience, it is that the ideas you get, no matter where they are from, or whether you understand where they are from or not, then they are based in some values you have as a human. Some core values.

[Interruption]

Subject 1: I experience that what I went through at Creative Genius, that opened for my own behavioral patterns, and ideas for whom I am, and what I'm aiming for, what I find valuable. And after I feel I found that more, after I feel I found a more specific direction, with these values, then I go that way. After I experienced that, I experience that every time I get and new idea, or the projects I have running, then it's a lot easier for me to be in, and I get better ideas. Because I go for something that I can feel, this is important for me. So that's the meaning it have had for me. And when

everything is going, also in regard to my projects and the creativity training I make, and the Visionærfabrikken project and there's also a new project after that, then I feel I get closer and closer to figuring out what my values are. Does it make sense?

Nicola: Yes.

Subject 1: Did I answer the question?

Nicola: Yes, I think so.

Subject 1: So one thing is that I've trained more, another is that the problems I'm working with, especially regarding me, and my projects, those I can work with a lot easier, because the creativity have allowed me to be more effective. And that might also have happened at some point, but it has at least been a giant catalyst for me.

Nicola: Did you receive any other training? One thing is teaching it, did you research anything?

Subject 1: No. I would say that, I have facilitated around thirty sessions in the last year and a half – maybe two years, and they have been inspired – it has been me who did that, my lust that drove it, my interest. When I have to pick and ensure diversity in the tasks I have, for my sake, but also for the participants, then I have to be restrictive in the training I pick, and how I do it – also coming up with new things. And that reflection gives a very big understanding for – or at least it makes it easier to understand why we did that and that and that. And then I can use it in my own process. Does it make sense?

Nicola: Yes

Subject 1: So, the more I understand, the more I can use it. And creativity is mainly about – like every second skill you want to learn – having knowledge about how something works, that might be half of it. And the rest is practical. And of course, that you can speak and have a vocal cord and all that. That you can move and make actions. But those two things, they are alfa and omega.

Nicola: Do you then believe that the creativity will decrease if it's not trained continuously?

Subject 1: I believe that's related to what kind of personality type you are. Or – you can't unlearn knowledge. You can learn a language and then be bad at it after, but you can always get back to it.

So, I definitely think that you can measure that you get worse after, but that also depends on how good you were in the beginning.

Nicola: So maybe it's something, like a language, that you can learn faster again then?

Subject 1: Definitely. And by personality type, I mean if it's close to your personality type, and your behavior, and here I'm thinking – if you know something like the big five personality test, there's some behavioral ways of being. And clearly, those types will have it easier at doing it. And that group, I belong to it, more than any other. So, I definitely believe that you get worse over time.

Nicola: What about you, are you more creative now, than right when you finished the Creative Genius Course?

Subject 1: Yes

Nicola: As a result of having trained it?

Subject 1: Yes, and my own projects. That have always been creativity.

Nicola: I'm just going to check what I need answers to. Alright, do you plan on continuously using it, that you can keep training your creativity forever, and that it will keep getting better? Or will you reach a point where that's it – then you can't learn anymore, you know everything?

Subject 1: I don't know what you mean by having learned everything?

Nicola. Being as creative as you can be. Reached your full potential.

Subject 1: I think that the more you work with something, the faster you reach a point which is interesting. That's my experience. But it have a huge correlation with your focus; if you aren't able to set your focus, you'll get a lot of ideas, but not something you can use for shit. So it's a discipline and a self-discipline to be able to define this focus. And that's also what I'm trying to say. The closer it is on the values you have, but possibly don't understand yet, the easier it will be to bring the focus, and to be creative.

Nicola: Can you tell me some more about that? Does that mean that people who are a bit far from their values and haven't found themselves can't be creative? Or can't be as creative?

Subject 1: They can be that, but it's harder for them.

Nicola: What is it that makes that harder?

Subject 1: Okay, I might not believe that it's harder for them to be creative, but they might have a harder time sticking to the process of creating something that's cool, and that they think is cool. They can easily get ideas – that's not a problem. But there's a difference – a lot of the people I meet, that I invite to a creative process, and who initially consider themselves creative, they have a hard time idea-generating for more than five minutes. So, they get ideas, and they do also create something, but when we look at creativity... It's also, what do we mean by creativity, does it always have to be original and new, we haven't defined that yet. So, should it be original and new, if that's our definition, then those people might never get an original idea. It will always be something they have seen before. But it might be that if they – it's hard to say, because... I would say, if we define creativity as an original and new idea, then you have to know something about your own core values, before you really can create something. Because the ideas you get, will always be colored by who you are. So, you might work as a nurse, somewhere. And then there's two kinds of nurses. One is new-thinking, enthusiastic and curious and experimenting. And the other is analytical, and just does the same thing that they have done in a hundred years. Or at least 50 years. Then that person whom is experimenting, that's the person who'll get the new ideas, which will be new for the departments. And that will the old at least not get. Because the new is experimenting, courageous and have the courage to spend time on getting new ideas. So, I believe the original though will occur there, more than with the more conservative.

Nicola: But that's also related to the five personality types. What kind of person you are, if you are exploitative every day.

Subject 1: Definitely. Definitely. But I definitely believe that the old – or not old, the conservative nurse, in this example, would be able to get original ideas. For sure. That person just needs to understand that you don't always have to be in a conservative mode. But that there's actually value to be added in the other part.

Nicola: So, it's about having faith in the process?

Subject 1: Yeah, but there's a lot of parts in it. It's also about letting go of control, and the undermining of authority and so on. There's a lot of parts to it. There's a lot of things that limits your lust to be creative. Or your openness to other's ideas. Or why... There're so many things. But that's

the ones which are really interesting to work with. I really want that. That's also the people who run away from such a creative process. It's if there isn't any right or wrong, how should I then deal with it. Then I might as well go home and get some coffee and cake. At least I know what that is.

Nicola: Do you believe that if you can overcome that mentality in people, that they be able to be as creative, as those who initially is open to try something new, just to try it?

Subject 1: No, I don't believe so. I don't believe that, because you have a behavior that you lean more toward. Maybe there's some people, who are all personality types equally, and who can switch to one, then switch to another. But you'll always be more thing more than other.

Nicola: So there just exist some people who are more creative than other?

Subject 1: Yes, I believe so. But I think you can learn a lot. You know, am I the most creative person in this room? I have no idea. There might be someone over there more creative. Does that make sense? No...

Nicola: Yeah, it does. It's about –

Subject 1: Yeah, it does. It's also in regard to whom we are talking about, you know. So it might be, that if that person is sitting – let's take the nurse again, who have done the same things – a conservative mindset. If she trains her creativity, learns that you can do the other. Then she's sitting together with the other five nurses, who initially have the same mindset as her. Then it would be her – who knows how to master these methods – then it would be her whom came with the cool ideas. And new idea.

Nicola: It's context specific.

Subject 1: Yeah, exactly.

Nicola: Now you mentioned it yourself, will you define creativity for me?

Subject 1: Then I want to say, there's two levels, the way I see it. One is the global, which is new and purposeful. But then I think it lacks context. Whom are we talking about? The general definition is new and value-creating. For everyone, I guess. That's the big one. And then the second one, that's also new and value-creating, but here it's on macro-level for yourself. And then all the groups in between. In a group, in a smaller group, in society, in an organization. Whatever it is, right. Or alone.

Alone to. Because if you're a caveman who are a completely new place in the world. And all alone. And no idea about how to find food. Then the idea of digging for roots – that would be a new and original idea. And then you might find a village where they have done that for hundreds of years. And then that idea is no longer original. But it's still value creating. So, it's all context specific.

Nicola: So, you see creativity as –

Subject 1: Then there's also the other side of creativity, which is about creative capacity, which is the ability to... Which is how good you are at combining your knowledge across of knowledge domains. And the further away the knowledge domains are from each other, the harder it is to create a coupling. So, that's definitely somewhere you could become better. Here it's also important to add knowledge, to some degree. Some new inspiration. So, creativity and creative capacity, are also there. And then there's your creative confidence. Which also enhances that you have the confidence to say what you mean, and to test your ideas. And some people might redefine it, that it's our ability to be brave. To jump in, when you don't know the output. [Inaudible].

Nicola: Are you equally creative every day? Do you have days, where you are more creative than other?

Subject 1: If I'm out of balance, in regard to my needs, what do you call it, my basic needs. Then there's other things in focus. And then it's hard to be new thinking.

Nicola: What if there's – No, could you tell me a bit more about what else could take you out of Balanced? What else could do it? One thing is being hungry, so it's hard to sit down for two hours making ideas...

Subject 1: Yeah. If there's things blocking your – blocking my.... If I want to walk one direction, but there's something in the way, that I can't control. Or that I can't decide when gets removed, that might limit my creativity. And then you might say, isn't it just also a creative process to remove them, and that might very well be. But, sleep – did you say that?

Nicola: Yes, basic needs...

Subject 1: Sleep, anger, all of these extreme emotions, right, which might be – definitely.

Nicola: In the way of it.

Subject 1: Procrastination, also a good one which blocks. Habits also blocks. Not having decided what you actually want, is also something that blocks. So that might be lacking ability to decide. That there isn't made a timetable, that's also pretty blocking.

Nicola: What do you do then, if you meet one of these? Other than the obvious, saying, hey, I'm hungry, so I'll eat some food before starting. What if you just have a crappy day, but have to be creative anyway? How will you then work around it?

Subject 1: Well, if there's a time pressure – that's hard, because I'm good with time pressure. I'm not good without a time pressure. Then I don't perform very well. I don't know.

Nicola: What about all practically. Your boss comes and tell you, now you have today to come up with –

Subject 1: I would be fine with that.

Nicola: A day where you are just feeling really bad? You're slightly sick, your kids kept you awake all night, and –

Subject 1: That would be okay. I think I will have it really good with having to – Alright, if someone is dying and I'm not handling it, I would have to deal with that. But otherwise I thrive, having to be creative.

Nicola: Then all practically, how would you do, then?

Subject 1: Then I would spend time get into focus, getting ideas.

Nicola: How would you do that; how would you get in focus?

Subject 1: I would think about it. And then I might walk around a bit, by myself. Walk in circles. And then a circle the other way after. And then in an eight shape. Nah, [laughter] I would just walk around. And then I would have a piece of paper lying somewhere, or otherwise having it in my hand. Sometimes it works well talking with other people, where I can just keep talking. But there might not always be that. And then just put time aside for it, that would be the best. And then say, if I need a good idea for that, then I have this much time for it, and then use the time for it. And then the person knows that I would deliver some form of quality ideas.

Nicola: Do you then become more creative? From the second your boss arrives and say now you have to do this, and then you have put this focus-time aside. Are you then more creative then, or is it just that you are more –

Subject 1: Yes, I definitely think I am. I have not experienced the situation, but I would say that I definitely would be. Definitely.

Nicola: I actually have all the answers I need. Do you have anything you would like to add?

Subject 1: I in the process of making a Højskole. In creativity, entrepreneurship and innovation.

Nicola: How interesting. Where?

As it looks now, it might be in Tværsted.

Nicola: How cool.

Subject 1: Yeah, and there we'll make things like this. Not what we made, but we're going to work on three different levels. Where the first level is somewhat high abstraction, so it's philosophy; what have we gone through as people. We are not as different as we believe, we have gone through a lot of the same things as our parents, it's just some other things.

Nicola: When you make it abstract enough, then –

Subject 1: Yeah, all lives have gone through some hardship, all have gone through easy periods. But the feeling, when you meet something you can't handle, it might be so overwhelming that you can't figure out... Everybody has been through these things. And they also had 3000 years ago. There's a lot of good knowledge to get from myths, from the folktales, and myths and religion especially. So that's the highest level of abstraction, the next one is to create projects, entrepreneurship. That might be local projects, it might be projects in your own life. It might be art projects it might be – what they will learn there, is to start up a process, idea-generate develop a concept, maybe make a prototype, stop and then make a new project. And that's also in regard to start up a company. So, becoming incredibly competent at that. Do it a lot of times. And the last level is about creativity, and skill-enhancement within creativity. We need – this motor for your thinking abilities, we need that to drive. That's very practical. So that's the three levels of abstraction that we work on.

Nicola: Can you tell me something about the last, then. Is it going to be similar to Creative Genius? In terms of the practical, but also getting the theoretical background.

Subject 1: Well, it will be very similar to what I have done on the Visionærfabrikken project. So, it will be at the same time as we are working with them to find their core-values. So, it will be with that focus, more that uncovering what's behind creativity. It will – what I think is important, is getting a lot of positive experiences with your own creativity. So that you just do the things automatically. And then you could delve a bit further on the things. Definitely.

Nicola: So, is it correctly understood that it's about giving them some tools to use, more than it's about teaching them why the tools work?

Subject 1: Yes. Why they work...

Nicola: You know, the theoretical background for why –

Subject 1: Yes, exactly. So, it's a practical-focused stay, you could say. And then learn... It's about learning to create projects, right. Make projects for yourself, and your own development. Where you later – when you succeed in doing this for you, and for your behavior, that step, that is to go out in the world and do a positive difference, which is based – or have the root in your core-values. So, we have to figure out what your core values are, before you can go out into the world and do something. Everything have to be based in values. It's really, really important.

Nicola: It sounds interesting.

Subject 1: Yes, I think so to. It's a nice project, and I think there's a need for it. There's a lot of people who are direction-less. And just do what's – what are the criteria for success for someone like me, today? In regard to society, right. Or the culture, if I look at what my parents told me, or what people my age tell me, then it's all about getting a bachelor, or better, a masters. Then you have studied enough. You have success. And then get a job and some money. IT's not really about having a live that you are happy with. Or about who you are as a person. I have studied for fifteen years. No one ever asked me what I want to do. Or yes, at Creative Genius. And that's something that made a major difference for me. So, one of the things that I ask of people, in this term on this Højskole, and also on Visionærfabrikken, that is to say, that is to reflect or write a mini-project, or a big project about what do you want? In three to five years. What is your plan? Where do you want to go? Put

a direction for your live. So, it's not just, well, mom and dad thought this was a good idea. Or that you are controlled by something you don't understand, or aren't aware of.

Nicola: Or just doing one day at a time, without making a plan for it...

Subject 1: I see that we need people who are more driven, in regard to what they are doing. Way more driven. Not just motivated, because motivation sucks. It's like a dog, right. It gets a bone, and then eats it. But when you are driven for something, then you also have the morale and your values with you.

Nicola: And you are saying that all of this is linked to creativity?

Subject 1: Yes, insanely much! I see creativity as the center of everything. As the motor of our ability to think. And based on that, if I should make a change in behavior, then I would need a good idea why, or why I need this change in behavior. If I have a good idea, then I make the behavioral change. And that's also introducing new habits.

Nicola: But if I tell you theoretically, this is a good idea. Then there's no creativity involved; I've just read an article. Maybe about eating carrots, instead of candy, or whatever it could be. Then there's no creativity in it. At least not in that step. Wouldn't you make a change in your behavior anyway?

Subject 1: No.

Nicola: No?

Subject 1: I wouldn't. You're appealing to something knowledge related. And that's – at least that's what I have learned – that is the lowest level, in regard to actually make people do something. Yeah, it might appeal to very intellectual people – but does it actually that anyway?

Nicola: What if I use other arguments? I appeal to your humanity, or something. You could still change your behavior from an external –

Subject 1: Of course, you can. But I believe, that if you really want to change something, then you have to make the decision yourself.

Nicola: And then the creativity is the main power in it?

Subject 1: Yes, its... Also, if you just have to learn something new. Learning something new, you have to add two and two in your head, to understand the new concept. You have to take some knowledge you have, and then you have to combine it. If you're not... If you're at all not... Without creativity, you can't learn anything. And then you might say, what's the first thing we learn, where's that from? And how can we build upon something which does not exists. Of course, there we have nature. Nature – there's something we know from our genetics; it is an ingrained part of us that there's some rules. Some rules to the game. And that's where everything starts. And then everything is built on top of that.

Nicola: Interesting.

Subject 1: Very interesting. And it's... I am... I am, and then there's two other who ae a part of this Højskole project. And two of us, we are very inspired by a clinical psychologist named Gordon Peterson, if you know him?

Nicola: I have heard about him, but I don't know he's theories.

Subject 1: He's wild. He's really wild. And he's very popular these days. Especially in regard to young men around my age. And especially in the USA, because there's... That's the group who are most attracted to what he says, because he's speaking a lot about getting a purposeful life, and... In a purposeful live, you also need to have defined what's valuable for you, and what is success. And for a lot of men, especially, if you take that group, then... Nah, that might be too generalizing. But it's connected to the school system over there, where people are just getting pressured through. It's just a canal, people are constantly tested.

Nicola: Yeah, they have a very rigid society structure.

Subject 1: And the ones who don't fit – it's also those who do, but it's' not the same. The ones who don't fit in it, they are judged not successful. And if you don't survive that, you're screwed. And then the ones who do get through, are they then happier on the other side, because of it? And they are not. They are not at all. They just have a completely screwed mental image regarding what's valuable and what gives their lives meaning. Then they have been at some job in a lot of years and earned a lot of money. And so what? And what he then says is that – he's speaking mostly to men. He's speaking generally, but it's mostly to the man. He says, what you need to have focus on... Well,

he's speaking about men and women, and when the woman can earn her own money and give birth and they just do everything themselves, so what's the man's role, suddenly. And then he's speaking about those things like being a good person and a role model and so on. And that's what it's about. More and more. And that... I believe in that too. A lot. And that's what we need here, too. For women and men both. And that's what this Højskole wants to work with a lot. Who are you? What's your values? What do you want to do? Where do you want to go?

Nicola: Anything else you want to add?

Subject 1: Do you have time for a myth?

Nicola: Of course.

Subject 1: Alright, then you get this last one. This is also very central for – I don't know if you know it, do you? [Shows picture]. It's central for the development we go through. With resistance. And how it feels when chaos overtakes us. This myth, it's a Mesopotamia myth. Or a creation tale from the Mesopotamian mythology, where you have Tiamat and Marduk. Tiamat is the goddess for chaos. The mother of all gods. And she rules. And the world can't manifest, it's terrible. And there's – she has some sons, and they have some sons and daughters. And they are actually – they are miserable that she exists, because they can't do anything, as long as she exists. Then they try to fight her. But they all return, completely blinded and hit by chaos. And they can't win over it. So that's bad. Then this new god arrive. And it's even further out. Third level or...

Nicola: Third generation?

Subject 1: Something like that. His name is Marduk. And he has eyes all around his head, he can see very well. He has a high consciousness. He talks magic words. So, he succeeds in using his abilities. And he says to the gods, I can beat the dragon. Or at least he thinks he can. And when I do, he says, you have to declare me the king of all gods. So he's all down here, in the hierarchy, compared to the gods. And he'll get all up there, if he wins. And the others then say, we agree, let's say that. And then he goes fights the chaos-dragon. And that was probably a long fight. And it was all terribly. I was the worst thing you could ever imagine, right. Your whole foundation is taken away from you, and you have to beat this. And he then succeeds in catching the dragon, in a net. And he takes out his invisible spear. And then he pokes the dragon, till death. And then one parts become the heaven,

and the other part becomes the earth. He becomes the king of all gods, and the world manifests. So, he's sorts of the picture of the human, and this is a picture of the things we meet which are uncomfortable. Or chaotic. Throughout our live, we have to fight with a lot of chaos-dragons. But it's only in the fight that we actually can win, and it's only in the fight – or in winning the fight, that our potential is released. If there's not – before no one went against the dragon, none of the other gods. So, the world couldn't manifest. So, in the end it would have meant that nothing becomes anything, or that everything just disappears again, that you shrink and becomes a small raisin. That might... So, if we are not brave to go against what's hard, then we are not going to become more. We use this story a lot. Tiamat and Marduk. Really old story, too. 3-4000 years old, I think. But equally relevant.

Nicola: Yes, there's a lot of them in religion, like this. Of stories and myths, I imagine. It's a cool picture of it. It is. "

Subject 1: Yeah, and then – I don't know why he has wings, it might be because he's a god. But there's some different parts. Why does he have a thing there, that's a bit weird too. But it is a woman. It's a woman. And the dragon is a crazy symbol. It's everything we fear, coming to us. Especially things sitting in a tree and can kill us.

Nicola: Yeah, completely basic goosebumps down your back.

Subject 1: And it's especially amazing, when you are sitting with someone who is all... They don't know what to do, they don't know what to do with their lives. They're all completely in the basement. Then these – Using these stories, it just gives... They understand. Now I'm down and it sort of sucks. But it's only by being down that you can find your invisible spear. No one saw he had the invisible spear. He hadn't even seen himself that he had it. He just suddenly finds it, and kill them.

Nicola: Cool.

Subject 1: Yes. Do you want this? [indicating myth picture]

Nicola: Yes. Thanks. Do you want to hear what I'm writing about?

Subject 1: Yes, I would like to.

Nicola: I'm generally looking at some things, as there does not exist a lot of studies about long-term effects of long-term creativity studies. There's a few – but not a lot.

Subject 1: How long is that? Long-term? More than a year?

Nicola: Yeah – when did you take yours? You took it in –

Subject 1: two and a half years ago.

Nicola: Yes. The ones that exists, almost all of them – with individual creativity, as this is – they are measured right after. So, you take the Torrance test, then you get some sort of creativity course lasting between a day and five weeks, and then we measure your creativity right after, and then concludes that your creativity has increased. What I want to look at, is saying, alright, but could we imagine that there exists two parts to creativity. One where you actually learn and trains creativity, and one regarding activation of creativity. Which there exists a bit about, but is never really discussed in this context.

Subject 1: What does activation mean?

Nicola: That is, for example, using tools to get more creative in the moment. And then you get creative either in relation to this specific situation, or you get creative within the next couple of hours, because you're in that mindset. And then your creativity is reduced again after. So, you could imagine, that when we do it the way we do, where you measure right after, then people's creativity is increased, because their creativity is activated. So, when we conclude that people's creativity training works, we actually can't be sure. Because we haven't tested whether it just is that people's creativity is activated. There does exist some studies – I've found two studies, one from '85 and one from 2015, which are looking at long term effects of creativity. So, it seems that there are long term effects of creativity, and I also believe that we can see from Creative Genius that there obviously are. But we haven't really proved it, and we definitely have not looked at it in relation to this activation. So that's one part. And another is what is this activation. What do people do to activate their creativity, how does activation work. Because, the things we have about it, is very – we have a number of studies that says that meditation seems to activate creativity. But that it does not immediately have a long-term effect, unless you keep meditating. And then we have some studies that says things like art can activate creativity. And then there's stuff like role-playing and so on. So,

this activation of creativity is a very fluffy thing, and I would like to go in and define it. That's the main things that I want to do.

Subject 1: And you are discussing individual creativity. So, not with anyone else? I'm thinking in relation with others, because your ability to be true and authentic in a situation with other people, that's really important.

Nicola: It's sort of a double thing. Yes, you can be creative together with other people, but as I'm studying innovation, so a lot of the innovation creativity that is discussed, they talk about team creativity. How you ensure as a good leader that your team is more creative, and so on. And it's not so much that, which I'm thinking about, it's how do you do the individual creativity.

Subject 1: For yourself.

Nicola: Yes. Or for the individual members of your team. The personal creativity, that we talked about. It's interesting, I believe.

[Irrelevant discussion]

Subject 1: Have you worked with beklædnings-bias (costume-bias)? That works very well.

Nicola: I don't – what did you call it?

Subject 1: Costume-bias. It's if you introduce a costume – or put on a hat that says, I'm the master of creativity.

Nicola: One of the few studies I have, that discusses activation directly, are talking about that they tested creativity on someone whom were told to be rigid scientists, and someone who were told to be... Maybe crazy artists, or something like that. And where they were discussing – yes, I have that already. But that's also considered a method of activation. When you do something that makes people more creative, in the situation. But I hadn't heard that term for it.

Subject 1: I think that's – you have it with other things. You also have it with emotions. Yeah, what did you call it? If you're a...

Nicola: Rigid scientist.

Subject 1: then you have it too, right. That you have too... But one thing is that... Yeah, of course it's a costume, that's one thing, in that you have to consider situations beforehand where you were very rigid or a situation where you were very creative, right. Which is pretty effective at activating.

Nicola: Yes, and also in terms of recognizing, what work for me, and what doesn't work for me. And when does it work and when doesn't it.

Subject 1: Definitely.

[Irrelevant discussion]

Nicola: Why did you pick Creative Genius?

Subject 1: I just saw the poster somewhere. I researched it, and it just sounded like something I hadn't done before. On university. And it was an offer I hadn't seen before. And it was also something completely different, methodologically. And I just didn't want that. The choices were an internship somewhere, where there were more of the same. Or something else. And then it was just the something else, which were more attractive. It sounded fun.

APPENDIX X: INTERVIEW SUBJECT 2

Nicola: Can you start by telling me about yourself.

Subject 2: Yes. My name is [REDACTED]. I'm 33 years old. I'm from Romania. And then Denmark for almost six years now. I graduated last year from Aalborg university. I did a master in cultural communication and globalization. And uh. Yeah. Uh for my ninth semester I think it's called; I did the Creative Genius.

Nicola: Yeah. How did you like the course?

Subject 2: Well it was definitely different than the than the rest. And uh I would say a bit more of what I imagine the university should be. Uh we were going towards uh a digital world so remembering information will not be useful. It already isn't that useful anymore. So, I think it's more important to teach people how to use information instead of having them memorize it. So yeah I was very impressed by it.

Nicola: Yeah everybody so far I've interviewed have been. I took the course myself to, so same thing. Can you describe creativity for me. The way you perceive creativity.

Subject 2: Okay. Yeah. Most people think about creativity as, I don't know, genius or a spark or something unique but... All right. I used to do that too. But after taking the class I understood that it can be trained, it can be worked on. Same as same as athletes. There are athletes who have talent, but with talent only, they only make it so far. You have to work for it. You have to train. So, if we think that the brain is a muscle so to speak then why not train it. So, yeah creativity is definitely a skill that can be trained and creativity is... It's what makes us human. Creativity is what makes the difference between artificial intelligence and human intelligence. Computers might be able to think faster than us, but for now, at least, they aren't able to create something no matter how or how fast they think. So it's not about brain power. It's something else.

Nicola: Can you describe that else? It's creativity but?

Subject 2: Uh. Creativity is. Creativity is walking the different path. Creativity is looking at something and seeing what no one else can. Creativity is uh yeah. So it's a little bit of craziness into it. The first time and most of my colleagues are like What are we doing here beginning of the class. Everyone

looked around like what are we doing here. But then everything started falling into place and there was there was sense in that madness.

Nicola: You said you know the brain is a muscle in regard to creativity. You think everyone can learn creativity?

Subject 2: Oh definitely yes. Uh one of the most useful things that I've learned in the class I was already practicing some form of meditation and uh I actually learned that it has a name and that it's practiced and uh it made me... More efficient in it, because now I had a name for all the things that I would do. I was doing intuitively and now I could I could focus on them and it made me concentrate better and uh yeah.

Nicola: What were these things.

Subject 2: Uh for example uh that was the monkey brain. I was already aware of it. I was calling it my inner five-year-old because that's. Pretty much pretty much where it was but uh I figured out for example that clicking the pen or tapping my foot is enough to keep the monkey brain busy because the monkey brain isn't very smart. It's basic needs basic instinct. So usually clicking a pen is enough to keep it busy and then leave the rest of my brain to actually focus on what I'm doing. And focusing on the now on the here and being able to focus exclusively on my task that that was something that I was I was doing but I was using it only for concentration and for example and somehow noisy environment I could focus on my task and not be distracted by the noise. But during a Creative Genius class I realized that it could be used to concentrate on the task at hand and be there now.

Nicola: All right. Do you think everyone is capable... Do you perceive these things as a part of creativity or rather something that can make you more creative.

Subject 2: Well there's this meditating thing that I was doing with the concentration. I think it helped you get to the stage that you need to be in order to be creative. So, it opens the door for creativity it doesn't necessarily make you creative. If we think about creativity as using the entire library of the brain, I don't know maybe it would be easier for someone who has a bigger library for in regard to someone who has a smaller library. So maybe some people would be better than others. And age

is also a factor. Brain loses its elasticity after a certain age. So yeah but to a certain degree I'm pretty sure that everyone could do it.

Nicola: You mentioned meditation as a method of... Enhancing creativity?

Subject 2: Yeah. I guess you can call it that you have other methods. And it may sound silly but I was talking... If you're trying to come up with something different you should do different things. So I would sit and meditate in places I wouldn't normally sit somewhere outside. I would sit in a weird position like with my feet up the wall just to break all the usual patterns because if you do the same things all over again. It's most likely that you will get the same results all over again.

Nicola: So you use meditation as a step into focusing.

Subject 2: Yes.

Nicola: Do you find that it also makes you more creative.

Subject 2: Yeah it does. I mean it's hard to say if it's causation or correlation, but it definitely, definitely helps. It may be self-suggestion and I don't know because the result is that I am more creative after a short session of meditation and it helps me be more creative.

Nicola: Do you use other things but meditation to do this too?

Subject 2: It's definitely my go to like I always start with a short meditation. Uh yeah. It was the first time what I heard about meditation it sounded like a scam and I didn't really believe in it. And if you don't really believe in anything it's not going to work. But then someone explained it to me as a discipline of the mind and that made more sense for me more... Explaining it more or more rationally then let's say I mystically. Besides meditation you know placement is it's also it's also a thing. I have favorite places and... That I go to and yeah sometimes just go. I don't know. At the edge of the city somewhere in and around a field. I'm probably not. That's something very scenic just outside just a place that I've never been before.

Nicola: Can go through like. All right. So now you have like this is what you would do if you have some creative problem you have to solve. So first step is you meditate?

Subject 2: Yes, I always start with meditation. My favorite place is my living room couch because it's a modular couch and I can arrange it in different places and sit in different positions. Then if that

doesn't work then I go outside and find some unusual place. Try to break the pattern. And if that doesn't work, well there's always another day. I feel that I reach a block if I try too many things and nothing works, I feel that it brings a blocking. I have to take a break from it.

Nicola: Then, when it works. When you got into the zone, what's the next step then?

Subject 2: The next step. Usually when it clicks it just clicks and ideas just keep pouring. And one of the other very useful things I learned in the Creative Genius, was to not focus on one idea no matter how good it sounded then and just write everything down all the ideas that I got. And so yes, I've become addicted to post it. It's just post it's everywhere. I tried a color system, but it didn't help as much as I thought I found it to be limiting my creativity. And that this first stage when my ideas just keep coming is more chaotic. So if I tried color coding the post-it broke the flow of ideas

Nicola: Like categorizing at the same time?

Subject 2: Yeah. So instead I just write everything down and uh then maybe try to organize them in categories.

Nicola: Can you give me an example of when you use creativity? Today, like in everyday life?

Subject 2: In everyday life.

Nicola: Or in your job.

Subject 2: Yeah. Whenever I encounter a problem, I like to break it down into pieces and see what can be changed. What is the purpose. What are we trying to do and get to the underlying principle on that and see, that instead of if something needs to stay up there something needs to be suspended somewhere. OK and can we do it horizontally and vertically and not limit myself to the basic question because there's never just one way of doing something. And if you focus too much on the question you limit yourself. So yeah that's. I think that would be the classic thinking outside the box. Yeah. That's the easiest way of working and in real life without doing an actual session with meditation and coming up with ideas. If you have a simple problem, I found this to be the most useful. Like what's the underlying principle here is. Yeah there's something moving that shouldn't be moving or the other way around. And so on. So that's very easy and then very effective and then then works most of the time obviously.

Nicola: All right. Going back to the idea of meditation you think everyone could use that?

Subject 2: As I was saying if you don't believe that it will work or at least be open minded about it then it will not work.

Nicola: What if someone believes it will work. If you have to sit with someone and find a creative solution with them and then you do meditation. Now you've trained this so like you said earlier that makes you more creative. Would it work on someone else too?

Subject 2: I think so. So my type of meditation is the ways that person explained it to me is uh so - our breathing for example our breathing is made happens automatic, but we can't take control over it if we want to. So if we think of the brain in the same way, like, we're creative, through training we can take control over that that creative part of the brain and that made way more sense than chakras and energy and so on. So if it's explained like that, I think it would make sense to much more people and make it more believable and if you're willing to try and be open minded about it. Yeah. I think the majority of people would find that it's working.

Nicola: Can you describe - did you... I'm going to backtrack a bit. Before you took the Creative Genius course. How was your creativity then? Did you use it?

Subject 2: Well, I had some idea about thinking outside the box and uh it was uh instinctual. It wasn't very organized so I would say my creativity was average or maybe slightly above average just because I had some idea of how it worked. So yeah nothing uh nothing spectacular. But uh. I mean I'm an avid reader. I read a lot so yeah, I have a good brain library but you have to know how to put it to use otherwise it's not going to be very effective.

Nicola: That's what the Creative Genius course did?

Subject 2: Yes. It taught me how to put all that that information to use no matter how useful or silly it made sounds. We've had countless exercises where someone would say something extremely stupid and then we would laugh. Yeah but if we switch this around it kind of makes sense.

Nicola: Yeah. What about your creativity now compared to when you took the course?

Subject 2: Oh yeah. It's definitely improved. Yeah definitely.

Nicola: So you're creativity now is even bigger than when you took the course?

Subject 2: Yes. Definitely. Like I was saying that if we think about the brain as a muscle it's been training.

Nicola: Well, if we think of it as a muscle, then if you don't train it, the natural assumption would also be that it deteriorate?

Subject 2: I would assume so. But once you get a taste of it it's difficult to stop. So yeah. It's an ongoing process. It's like uh. Again I'm going to sound silly. When we were kids we were we had this one friend who was able to move had one of his toes independently and of course we were I don't know eight ten at the point and we were very jealous and we struggle to do it seemed impossible. And then one day I just did. It just clicked. I mean the brain and the toe they are always connected you just have to be aware of that connection. And one day it clicked. So even though I haven't practiced it since I was 10 I can still do it today. Like the connection is still there. So once a certain connection in the brain are made they don't really go away like a more adult example would be that I studied French in elementary school. And I was I would say fluent in French and I haven't used it for 13 - 15 years. But recently I met some French people and uh even though I was having difficulties speaking I could still understand perfectly what they were saying. So. The brain is uh is like a muscle but it's not a muscle. It's similar in some ways but it's not a muscle per se. Like you don't ever forget really forget a language or riding a bicycle.

Nicola: You might need to - if you haven't used it for a while, your skill level is lower?

Subject 2: Probably but it would you would get back faster.

Nicola: You get to build it up quickly.

Subject 2: Yeah exactly.

Nicola: You're saying your creativity is bigger now. How often do you practice your creativity?

Subject 2: If you talk about doing an actual creative session like actually taking the time to meditate and find a place. I rarely do that. But uh the basic version I'm just trying to find different solutions to different problems every day in my job and in my home. Yes definitely every day. Uh. There is a saying I tribute I think to George Washington. If my task would be to cut some woods I would spend and I would have two hours for it. I would spend one hour and a half sharpening the axe, and half

an hour to cut the trees. So whenever I encounter a problem I take I don't know five 10 seconds to think about it okay. Can I solve this problem differently. Yeah. So yeah definitely. I use creativity every day.

Nicola: Is there some days you're more creative than others?

Subject 2: Well that's... How do you measure. How creative is one.

Nicola: Then take that. How would you measure whether you're creative or not.

Subject 2: Oh yeah. That's it. That's a very difficult question. That's what I was saying. Creativity is there. Like that part of the brain and everyone has it. It's just a matter of training it. So I would say yeah I mean I am more creative than average. But with training everyone can do it. So yeah I'm just more trained at creativity and that's more creative I say. Yeah. Yeah. Creativity is such a such an abstract notion to define and to measure it's basically impossible to bring it into measurable units. Like how many ideas per day do you get.

Nicola: Yeah. Are there then days where you feel more creative than others?

Subject 2: Yeah that that's definitely the thing. The regular education teaches people how to memorize information and then try and then apply it directly and uh it's easy to see that that uh that both. People rely too much on the internet and finding more information. And it definitely helps, it solves the problem but that will always mean that you will always solve the problem in the same way all over again. So if we don't have creativity we'll just keep doing the same way the ancient Greeks did it. I mean they were they were brilliant people they had brilliant philosophers and mathematicians and. But yeah we need to find better ways.

Nicola: So there is days you find yourself more creative than other days. It's just hard to define for you?

Subject 2: Yeah I guess so. I mean. You know.

Nicola: I'm maybe not creative as it's called but then the ability to use your creativity

Subject 2: Yeah yeah. Then then yes then yes. Some days are like Yeah. Uh. Some days are just bad days.

Nicola: So what do you think does that then. It's a completely random or?

Subject 2: There's also random days. Bad weather definitely doesn't help. Your personal life. Bad things happening don't help. Uh. If I have too much stuff on my mind like meditation can only help me so far it's impossible to completely block everything. So. Yeah.

Nicola: All right. After the Creative Genius course. Have you had any other training in creativity? Like other than when you use it yourself.

Subject 2: Not a course, but I started playing more uh role playing games. And those are very good at uh stimulating creativity even if it's a certain branch of it, more related to fantasy. But uh it's very close. Like I actually did my project on using. A pen and paper role playing games in stimulating creativity. So it's definitely there and uh there are no set rules or there are very loose rules for pen and paper. So you have to be creative and then think you know on the spot. And uh. Yeah I guess that's a form of training.

Nicola: Now I've actually got my answers to everything I need so before I start explaining to you what I'm doing, do you have anything to add?

Subject 2: Yeah. I said in the beginning that the way children especially are taught, I think it's wrong and the brain is very sensitive and in child they learn very fast but they also fall into patterns very fast. So if we start shaping them from young ages into memorizing things, it will set them on a path of doing and doing just that. So. I hope that will change at some point and your education will focus more on.

[Interruption]

Subject 2: Education should be reformed towards using information because everyone has a laptop or a smartphone at hand pretty much at any point. So memorizing information is falling into disuse is becoming obsolete. So. Yeah focus more on using information than memorizing it.

Nicola: Yeah, understanding the information.

Subject 2: Yes.

Nicola: All right. Anything else?

Subject 2: No. Pretty much it.

Nicola: All right. All right. So by this study I'm making, it's actually twofold. There's not a lot of studies made on long terms effects of creativity training. So that's one thing. There's a few studies that proven that works. So a part of my study is simply proving that it works again. Which is my assumption and so far have been corroborated. The other part is something I call activation. This is what you're actually doing when you meditate or play role-playing games and a whole ton of other stuff that falls into this role. Which is not training per se but puts in a creative mindset all temporarily do something that increase creativity like could it be how you're feeling or you know looking at art or these kinds of things. Yeah. And this doesn't really like.... We have a few studies that talks about this but most studies that talks about creativity do this thing, you know, they give the Torrance test and then they do some creativity training and then right after the give the Torrance test again. And my belief is that creativity training does two things. It teaches you creativity generally but it also activates your creativity. And if we only measure right after. We don't know if we're measuring actual learned creativity or just activation happening from there. So this is what I'm. Yeah. And then of course trying to define what activation is because right now it's a very fluffy, you know size. No. So yeah and you're doing it a lot. I can hear like all the meditation like you sounds like you're starting with activation a lot which makes the data very interesting. So yeah.

Subject 2: I'm glad it helped you.

Nicola: Does this do that does it make sense for you.

Subject 2: Yeah yeah yeah. You said it already. Once you activate that part of the brain it doesn't really go out but it helps if you keep using it.

Nicola: So there's the training which is about actually learning to do the things and then that's the situation when you activate your creativity. You know just like riding a bike you might... you know one thing is you know how to do what you need to do. Another thing is to you know learning to keep your balance again. Yeah yeah.

Subject 2: And uh yeah comparing the brain to a muscle like when you start working out when you are beginning you do certain exercises when you get proficient in it you do other things.

Nicola: So yeah it's about learning how to work out and then building up muscles too. But then if you forget to train, your muscles will deteriorate. But you already like it. Do they want to build up again. You already have the knowledge about how to work out how you can build it up faster.

Subject 2: Exactly. Yeah right. That's an interesting topic.

Nicola: Yeah. It's very hard because there is nothing of it in the literature so it's a yeah.

Subject 2: It makes it both easier and harder at the same time. Yeah. Yeah. Way less reading articles and way more I guess. All right. Any last comments?

Nicola: Uh no that's it.

Subject 2: Then I'm gonna stop this thing.

APPENDIX XI: INTERVIEW SUBJECT 3

Nicola: All right. Can you start by telling me a bit about yourself.

Subject 3: Well uh. 28. Girl. Danish.

Nicola: What do you work with?

Subject 3: I work with add evaluation and Search Engine Optimization.

Nicola: All right. When did you take the Creative Genius course?

Subject 3: Uhm. 2016 or 17-ish. '16 I think.

Nicola: How did you like it.

It was really fun. Yeah. And educational in a different way from the rest of the university.

Nicola: Can you tell me about it.

Subject 3: Well basically when you run in these higher educational environments then you have a certain way of thinking about things and you get set in in certain boxes and then try to figure out the way you're supposed to tackle a problem every time you see it. And with the Creative Genius semester they try to teach you to use experiences from very different places and try to teach you that even though your idea comes from a completely random place and it seems ridiculous if you try to explain it, it can still be a very good idea and it's a legitimate way to think about things which is quite valid , when you are used to being told you are really weird.

Nicola: Do you use this way of thinking today?

Subject 3: Occasionally when it comes to the evaluation of certain ads. But that's because you have to figure out whether something is relevant for a specific search term, so you have to be able to think of a term in broader ways than just the specific word it is. So, a little but not so much because the whole process is very... it has to be set into algorithms so there isn't much room for these kinds of things.

Nicola: What about outside of the job. Do you use your creativity?

Subject 3: Mostly in stupid games with some friends and you it's given a way to explain to people a lot better why you think of things in a weird way. It's... well it's because of this thing over here. I was saying that thing and it's not just because of I got weird ideas.

Nicola: What kind of games?

Subject 3: Mostly a friend of mine who lives across country. We text each other a lot and we end up playing like little word games or little games that where you know you say something and then you associate it with something else and you're associated with the third thing. And it ends up feeling very random if you look at the conversation and don't know what's going on. But yeah that happens a lot. And occasionally with some of my family members because they think it's fun too. You know those cards that you use for the exercise this semester. Yeah because we got a stack of those. So, some of my family members thinks it's very funny to mess around with those.

Nicola: All right. Do you do the exercises from the course then?

Subject 3: In a way but not as not necessarily a structured with the whole we have to do this for three minutes. We do this for two minutes. But like with the cards if you do the whole combination of two things that aren't necessarily related to one another that they like those because it's fun to think of something weird and it's fine to be weird for the sake of just thinking of something new and then occasionally you can kind of come up with something that actually sounds plausible.

Nicola: Do you think the games do something for the creativity.

Subject 3: Well in the sense that it will allow you to more quickly connect things that aren't necessarily connected to begin with. Then yeah definitely. I think mostly what these games do is that they help you think a bit quicker on your feet and try to keep an open mind when you talk about things whereas if you were presented with something you think is weird you might have a tendency to go, well, what's going on. And I think the Creative Genius method teaches you a bit to try and just accept something that's coming to you without necessarily fully understanding it to begin with. And I think that's a plus for maybe especially university students. If you end up with something some ideas or some theories presented that you just don't really necessarily understand that you get taught to just try and do it and try and use them and then figure it out along the way that it's okay to do it that way.

Nicola: You think this is what happens with family members too when they try these games after even if they haven't taken all course and everything.

Subject 3: Yeah in a way. I mean it's a very common thing in my family that we tend to play a lot of strange games and board games and things like that so. And even with the board games if you play around then you go by the rule and then you play a different round and you make up rules because there were particular parts of it that were boring or something. So, we do that a lot. So, I think it's mostly an extension of things we've already been doing, and they find it very funny to think that it's a genuine course. But yeah and I think also for my mom says that it's quite good with not necessarily memory directly but indirectly with remembering things and with the lighting keeping the little gray brain cells up there.

Nicola: So, all right I'm going to backtrack a bit. Can you explain creativity to me as you perceive it.

Subject 3: I think creativity is basically just the way you think, no matter who it is and no matter how it is. It's a very vague description, but that's because I think you can't really specifically define what it is. I mean I think it varies a lot also, but on an individual basis depending on the context of something that's generally thought of as creative like arts and music and whatever, it's not necessarily where your creativity shows the most. And I think it's just mostly to keep an open mind and, in the way, you think about things.

Nicola: So, the concept of creativity is basically how you think about things generally. Does that mean everyone is creative.

Subject 3: Definitely.

Nicola: Does that also mean that everyone is equally creative.

Subject 3: Again, that's hard to say because I don't think creativity is necessarily something you measure in levels of how much how creative you are. I think there are certainly people who explore their creativity more and try to develop it more. But I think that that the potential is there for everyone. So, I don't think that there are people who are inherently more creative than others. And I think that's... I think if you try to work to work on to work on it then everyone is going to find themselves feeling more creative and find it easier to be creative and how they use it in specific situations maybe and yeah if you're really creative with one thing then maybe you're just not very

creative with something else then you can be very traditional in one subject and very explorative in another.

Nicola: Did you find that you became more creative from the Creative Genius course?

Subject 3: I find that I became more accepting of creativity as something other than the general thoughts you have when you hear the word. So, I think it's a decrease of a bias towards a specific keyword more than it is becoming more creative. I think you become more aware of when you're creative.

Nicola: Could it also be that you become better at the creative process.

Subject 3: Probably. I mean you do practice a lot of for the lateral thinking and you practice a lot of these strange combinations and things like that. So sure.

Nicola: Did you then find that instead of creativity as the inherent ability that everyone have equally but rather than the ability to utilize it. Did that increase during your Creative Genius course.

Subject 3: Yeah, I think so also because you're set in a group that where everyone tries to participate in the same thing. So that of course always helps. I think it's more difficult if you'd have to do it on your own. And I think that the Creative Genius master's is definitely a really good steppingstone to help people develop these skills and then the ability to look beyond what was necessarily written on a page or what's in the theory. I think that.

Nicola: What about now then one thing is that in the situation, in the course you're extremely creative because you're surrounded by it and you do it once a day. What about now. How creative do you find yourself. If you were to take all being like creative right now would you be able to do it?

Subject 3: Yeah sure no problem.

Nicola: And as well as you could on the Creative Genius course?

Subject 3: Like I think so. All right. It's difficult to say but I think so.

Nicola: How would you do it if you had if your boss comes tomorrow and say hey, I need you to go full blown creative on this thing.

Subject 3: Well of course then you need like to know if they want any specifics or if they want just completely random things. So of course, you have to narrow it down what did they say. Because again it's such a broad term. So, but you know depending on the problem if you're looking at my work for instance then the creativity, they would need would probably be an algorithm development and in the process of evaluating whether or not something is relevant to specific search terms. So, if you have to go with creativity on that then every structure of the way you have to look at these ads and, in the way, their whole system for these evaluations work. Yeah, I think that's how I go about it.

Nicola: What about more practically. Would you use some of their tools

Subject 3: To demonstrate probably also because the work I do is so globally based. So there aren't people in contact with each other necessarily very much you're in contact with like a manager of sorts. And then you get a workload and you sit, and you work with it at home and do it on your own. So this it's very individual but if you have to introduce it then I think yes some of the exercises maybe introduce those or reference to some of the content that we've had throughout the course and the book that we used for instance also because I can't physically show them what to do but I can reference these exercises

Nicola: What about if you had to do it yourself. You got some insane creative task that way out of your work but something that you did on the Creative Genius course and you had to do it right now. If I were to give you a task how would you practically do it.

Subject 3: Well I think again if you want to warm up with the process then use some of the cards use the random connections and pull up. I quite liked when you have to do idea generation and you pull up a random word and you have to think of an idea relating to your topic with these random words. I quite like that. And try to figure out alternate uses for things and stuff like that. So yeah some of the exercises yeah probably as a warmup and then the using some of the key words that you find.

Nicola: Now you mentioned the word warm up. Can you describe what you mean by that.

Subject 3: Well in particular some of the if some of the like some of the drawing exercises we have like different pictures with lines on them and you draw something random after honest in a set time.

Nicola: I'm really thinking Why do you do the warmup like you're doing it.

Subject 3: I think doing things like those, it helps get you into a mindset where you have to think of different things in quick succession, without considering pros and cons of them too much. And it allows you to have a greater idea base for later if you need it. And I think the warmups help sort of... Well like you warm up for physical exercise then it's the same thing with your head. You get yourself in the right headspace, then it's easier to do.

Nicola: So, you think that you'll be more creative, if you do the warmup first compared to not

Subject 3: I think it would be easier and I think you would get yourself focused into this particular way of thinking more so than you would if you were to just directly do it. I think you can certainly do it without warming up. But I think if you tried for a more focused effort then the warmups will help get you in to a particular way of thinking and try not to criticize too much. We tend to evaluate ideas in our head a lot when we have them just randomly and then the warm-ups help you just. OK. I did write it down then the next.

Nicola: You think someone who did not take the Creative Genius course would benefit from doing warm up exercises too.

Subject 3: I think so if they have a mind to do so. These things only help if you want them to help it. Yeah but with thought processes it's very difficult to help someone if they don't believe it helps. Yeah so but yeah if they if they think it will help them definitely. And I think it's relatively simple to show people again that you how to do these exercises because they're not complicated exercises. So, I think if someone even if they haven't done anything creatively or with the Creative Genius know anything about it. If you show them these exercises, I think they will relatively quickly be able to grasp the concept of it because it's very simple. And I think a lot of it could definitely help as long as you let it.

Nicola: Do you find days where you're more creative or where you have a higher creative performance than other days?

Subject 3: Yeah, I'm sure there are. I couldn't think of anything specific or any specific situations, but I think there are days when your thoughts wander in in different directions.

Nicola: So, what do you think would influence it?

Subject 3: Generally speaking, I think your mood would influence it a lot. Like if you're in a good mood then you're probably more accepting of whatever comes to you and if you're in a bad mood you tend to be more critical of ourselves or some generally your mood would affect it a lot and also your company depending on what kind of people you spend time with. I mentioned with that I play some of these games with my family and my friends and with the. Boyfriend's family they don't do things like that. So, it doesn't happen so much they are there they aren't. It's not a family where you randomly make a game of something and do something just because you can. So I think it depends a lot on the kind of people you with in the kind of environment you're in as well if you if you feel comfortable I think it's easier to let the creativity out anyway because it is if you are surrounded by people who don't know what it's about then it is very strange. So yeah mostly those kinds of things.

Nicola: These games like how often do you play them.

Subject 3: Well with my friend about well average about four times a week.

Nicola: All right

Subject 3: At least. And then maybe two or three games depending on what happens. And sometimes they'd go on over a couple days and sometimes that lasts for two minutes. So, it's a very loose timeframe but about four times a week with this particular friend with my family when I see them which is varies a lot depending on whether there's something for everyone together.

Nicola: Do you perceive it a bit as some training your creativity or do you become better and better.

Subject 3: Well I think it's easier to slip into various mindsets and to put yourself in place of something else and say OK well this is the thing we're thinking about our switch over to something else. It becomes easier and less disorienting if you have to think about five wildly different things. So, I think it also helps if you want to do a lot of multitasking because it's easier to go switch on here and switch on hands which I'm here. I don't think of it as training when we just do it. So, I'm sure it helps but it's not something that that that I consider.

Nicola: All right. I'll check if I actually have answers to all my questions. I actually have answers to all my questions. Amazing. Yeah. Have you. You haven't received any further creativity training since the cause.

Subject 3: Well a little bit but that was when I was writing my thesis because I wrote it on creativity and business models and business development. So, I used it a little bit following the course, but I was directly following. But other than that, nothing that was specifically targeted towards creativity training.

Nicola: All right. You have anything you'd like to add before I tell you what I'm writing about.

Subject 3: Well we're talking about the whole issue about it helping in the university setting and I think that's something to keep in mind that it might actually be good to help university students open up a little bit and not everyone thinks the same thing necessarily but everyone has the same base to go from and then you can get more interesting things to an interesting discussion. So, I think it might be good if everyone had to try it a little bit. Not necessarily full semester but just give it a try.

Nicola: What do you think would happen if they did?

Subject 3: I think it would. I think it would help with that. When you have to relate in particular your studies to other things and I think it would help when you have to in particular Aalborg University because you have to write the problem-based learning. I think it would help with this as well. When you approach a problem if you have been taught to think about a problem from different directions then maybe the obvious three when I hear a problem. So, I think it would help with that as well to get some more interesting more interesting studies.

Nicola: Are you thinking mostly about the exercises here?

Subject 3: Well that and when you. Well the course in itself as well. The information you get about learning a little bit about horizontal thinking and the way we connect things with the parallel lines of thought and how we relate things to each other in terms of different experiences that it can be perfectly reasonable to have an idea for what you're doing in your studies because you happen to have a hobby or a grandma or something over here that isn't necessarily related to your studies at

all. But it gives you the idea and I think if you have this knowledge from the Creative Genius semester then you become more accepting of an idea no matter where it comes from.

Nicola: You're kind of differentiating between learning how to do exercises but also learning why to do them.

Subject 3: Yes.

Nicola: Anything else.

Subject 3: Not that I can think of.

Nicola: All right. What I'm writing about is two things. One is that the data on long terms effects of creativity with people who have had long term training. There's two articles out there. Yeah. One from eighty-five and one in 2015. So, one thing is that I'm cooperating. Like I'm just checking. Yeah. You know if this actually exists. The main part of it is that I'm talking about something called activation and it's not something that is really discussed at all in the field. But this is where I'm differentiating between training which is about learning about lateral thinking and about the monkey mind and all of these things. And then the exercises or your mood or meditating or something that you use the term like put you in a frame of mind something that makes you more creative. And a big part of my research is that I'm assuming that when you learn creativity training it activates your creativity too. And what almost all studies do is that they research you know they'd give you the Torrance Test then they give you some creativity training and then right after they give you the Torrance test again. Yeah. And he I'm assuming that show you have your liberties in hand from the training but also from the activation. So, unless we actually do some long-term testing, we have no idea if this training is actually training or just pure activation Yeah. So yeah that is basically what I'm writing. Does this make sense. What do you think about it.

Subject 3: I think it's very interesting. And again, because with the with all the I remember writing with the creativity as well as a legitimate topic. Yeah. Was very iffy at the time when I wrote my thesis as well. That was yeah it was. It was a hard time finding the scientific articles about it. So yeah, it's definitely interesting and difficult. Again, with the whole long-term effects I had issues with that as well and I was looking into it. And then with using it in this business sense. So, you know I can see

I can see the need for it because it is there is there is a big difference between being evaluated on something you've just learned and being evaluated on something you've learned years ago.

Nicola: Yeah exactly. But what I've seen so far when I'm talking with Creative Genius alumni is that they all activate their creativity you're doing in trough games. I talked with one who did a trough meditation one who worked with it you know like everyone keeps like activating.

Subject 3: I can imagine that people keep parts of it yeah. Also, because it was its genuinely fun.

Nicola: Yeah definitely. Yeah. And that makes it a bit interesting because I was kind of assuming that there was people wouldn't be using you than those, they would perceive their creativity as less than before but so far everyone is using it a lot. But that's also the problem with this activation that is such a broad thing like it's so undefined that everything can be activation. Yeah. You know everything from like that. Books and looking at art and doing games. And yeah, I have yet to find something that is not defined.

Subject 3: So, you know it could be very helpful and very unhelpful.

Nicola: Do you have anything else to add?

Subject 3: I think part of the reason why everyone is using it again. You with the whole Creative Genius thing it's very intense the semester and I think that partially it probably changes people's habits a little bit too. So, you get into the habit of doing these things and then of course as time goes by a different parts stick for different people depending on what works for them in particular. So, like with some people who end up feeling like Oh meditation was great so I'm going to do that for 10 minutes for some people who feel like doing stupid games is great so I'm going to do that. So different parts will stick again based on them because your individuality. But yeah, I think it's a habitual thing as well because it gets it's very intensive. Yeah. The amount of training you do and how much you actually use it while you're doing this semester, so I think that's probably yeah

Nicola: It seems for most people some part of the brain gets unlocked.

Subject 3: It does feel like that. It's probably very obnoxious to people who don't you start going out on a tangent, like, this is great, and everyone has to hear about the really super annoying when

you're doing it. It's. I could do that. Really. Really. No. Yeah. Like. Yeah. Like the whole enlightened people. Yeah.

Nicola: Yeah. We have seen the truth.

Subject 3: Yeah. It's almost a religious thing. On some level probably. Yeah. So, I think yeah. It could probably be partially like a switch. But I mean it's one of those things where you go oh. And then yeah. It's not something you necessarily thought about before but when you think about it then it makes a lot more sense.

Nicola: Yeah that's kind of the part I consider the training part. But now you have the ability to do it and then the activation is when you do it.

Subject 3: Yeah actually.

Nicola: Yeah. Like you know learning how to work out you know, and one thing is to learn how to move your arm a lot of things to do it. Yeah. But then you do it you build up the muscle. You stop it the muscle you know getting smaller, but you can quickly build it up again because you know.

Subject 3: Yeah. You know the basics. You don't have to start completely over.

Nicola: Yeah. Exactly. You know how to do it. It's just a question about whether or not you do it.

APPENDIX XII: INTERVIEW SUBJECT 4

Nicola: All right. Can you start by telling me a bit about yourself.

Subject 4: My name is [REDACTED]. I'm 28. I studied business administration and innovation at Aalborg University and... I mean I graduated. I studied also in the Creative Genius group. And right now I'm still looking for work.

Nicola: Which year did you take the Creative Genius course?

Subject 4: In 2016. In the fall of 2016.

Nicola: All right. Can you tell me a bit about the course?

Subject 4: Oh it was I mean it was I think it was quite... We could have done it in less time. Yeah we had time to kind of put in practice I would say that all the concepts that we had. It was something new something very different. It was very relaxed. Yeah it was very relaxed atmosphere. And it helped me. I mean being aware of the concepts related to creativity and having kind of a framework for yourself and for training and conducting creativity training and creativity training in processes and groups. I mean it's not that you don't really you know the words in a sense but it helps putting some structure into this whole thing. And now I can say confidently that I can conduct creative processes with groups or even myself. And I think it was it was a very good experience to have. Yeah. And I think in a sense I think it should be kind of mandatory for everyone. Yeah. It's just it's really helpful. I mean among other things there are a lot of topics that are very interesting. But this is kind of in the background of everything. So because I feel it kind of gives you... If you don't take this course you might be creative but sometimes it's just having the knowledge that you have different categories of ideas have. And in terms of quantities of ideas different categories and having more unique ideas and getting original ideas. It's really helpful. You know I'm not even in everyday life because it's kind of like having... Before I don't even know what I can do, now I think of myself. They're kind of infinite possibilities. Not really infinite but I know that I can be more optimistic even though I don't have an answer to something now. I'm capable and I know I can't do more just by spending more time on something trying to look it look at it from different perspectives.

Nicola: Is that the creativity of it or is it something else too?

Subject 4: Can you repeat?

Nicola: Like that ability to now have faith in everything, like, in your own ability. Is that the creativity part?

Subject 4: Oh yes. Yes. I mean I've... Before. Maybe I was taking a more like a process step to things. And if I didn't know something was like oh god I failed. I mean it just like just stopping at some point but after the course I feel I felt like there's that thing that self-efficacy. And I really feel to help not maybe not in the time of the course but it sticks with you. Yeah. And just reviewing it like going back to the materials and reading them again it's... Even after I had the course I reread the book and it's so it's really helpful. I'm feeling better. Yes.

Nicola: Have you taken any other creativity training or read other books?

Subject 4: No. This was. All I had only read some things about creativity but it kind of felt like it was the same thing over and over and over again. So no. No.

Nicola: Are you using your creativity now? Some of the things you learned from the course.

Subject 4: Oh I mean I use it in my CV. Yeah. I mean I hope and I think it's a different differentiator in terms of not many people are. I haven't heard about many people being trained in creativity.

Nicola: But what about the... Being creative isn't something you do in your everyday life?

Subject 4: Yes I mean I like cooking and trying to find different trying to experiment. Yeah like I play music and that's kind of I mean like DJ'ing. So I exercise and I try to get creative in the sense the sense.

Nicola: Do you use some of the tools we learned the processes.

Subject 4: I haven't in a formal environment. No no. If I haven't I haven't. I mean, I don't really know how to answer this. I'm not that I know...

Nicola: Take your time.

Subject 4: For example I had an internship. And there I had to come up with solutions too... I was working with the company and they were trying to sell a product and I think I used my creativity there, in trying to think about the solutions that make finding companies to contact thinking about ways to improve the product. And even though it wasn't a formal process. I think having had this

course. It helped me like trying to like not giving up just thinking everything even though even when I have a blockage in my head I have the idea of stepping stones and then was like OK maybe it's I don't know I'm not I'm not going to get the idea today but in a few days if I expose myself to different materials then I'll probably get some ideas yeah or something will link.

Nicola: That makes sense. Can you describe how you see creativity?

Subject 4: Can you be like in everyday life?

Nicola: In relation to your own creativity. Like if you had to explain creativity to someone who have you know only the most basic understanding of the concept. How would you explain it.

Subject 4: For me it is trying to find connections between things. Even... Sometimes when I when I'm with my friends. We laugh just because sometimes we come up with different connections that are not really like other things they're not connected you connect them and it can be funny and it's in the sense. I try to. Even know when I'm looking for a job. Right now I'm interviewing I'm going to interview with a company that wants to do some... It's called atmospheric water generation and it's one technology but.. While I was reading an article on a different way different topic came with the idea that technology can be used here. So yeah I mean it can really put my finger on it like this is because it's over the course but I do feel that I have. I feel like my mind is more open to possibilities. Yeah.

Nicola: That makes sense. Do you feel that you... Is it correct to understand you feel you become more creative when you took the course.

Subject 4: Yes. Yes. I mean I've.. maybe it was some kind of a catalyst. Yeah it's like being exposed to an environment, where we had to always try to force us to be open listening to people. This helped me like even after even a year or so after. When I interact with people sometimes I just try to observe myself trying to see like, OK. Am I being way too judgmental of this thing. And if I think... I mean sometimes I just feel like I could say something in this conversation and just gonna let it flow. Because you never know what the other person will come up with. So just if they stop a conversation it's not going. And I mean I try to be observant of my behavior and my thoughts.

Nicola: And that's after to the Creative Genius course?

Subject 4: Yes. And also I took up meditation after the course was it. Now I realize it helps. Yeah.

Nicola: What would your creativity as well?

Subject 4: It's rather with the focus parts. Yeah. Because it's. I think once if you spend too much time on something where you are way too focused on something at one point it just feels like clutter. And meditation really helps with at least, like, taking the temperature down. Cooling your head.

Nicola: Is this something you're doing. Like if you know yeah are you using meditation before working on something or when you get stuck on something?

Subject 4: Sometimes I use it. I haven't done it in last week I was on vacation and I didn't really need it. But when I'm with home I always meditate in the morning. Right after have either before or after breakfast. Depends how I feel. And whenever I work on something and my head becomes... I mean I've used it in a conscious way for creativity. I don't know maybe a handful or just a few times, but sometimes I feel like it's just either I go smoke a cigarette but that's not that's not healthy. So I'll rather just take five minutes 10 minutes maybe and I have that mindfulness app and I use it for. Just a turn. I play it and just close my eyes and relax.

Nicola: Can you tell me do you your used meditation in relation to creativity a couple of times?

Subject 4: Oh yes.

Nicola: Can you tell me about how do you do like that. I just when do you use it. How does it. What does it do for you.

Subject 4: I start working on something and then I realize I might either I can't. I realize I can't concentrate or I don't feel like doing the thing I'm doing. Yeah. And then I. Either quit this. But I know it's important. So I won't. So it's I know I have to do something and I think about, am I hungry? No, it's my mind. So I just go. I have to have a place where I always just stay and just relax for 10 minutes or meditate.

Nicola: And then afterwards?

Subject 4: I wouldn't say it's a cause effect relationship necessarily. Yeah. And it's not always. I feel like the mood for working creatively is it's more than just the meditation part. I know it's even sometimes it's the last couple of days what happened in the last couple days you have it in your

head that's affecting what you do and how you like... Your determination to do something. So. I'm not. I don't know. Sometimes I had this thought that it's kind of like cause and effect but I feel like it's more of a very organic process. You know sometimes you just have to be patient with something. Yeah like I can try to do something that if it doesn't work try to meditate. If that doesn't work when I'm come back to the drawing board then I'm like OK. I'm I have a deadline for this thing. Yeah I have to do it at one point. So just try focusing on it and doing whatever I can with it. And if I can get some ideas that's great but if not maybe I'm just going to have to invent some excuses for why it's not that good. I think it helps but it also depends on your background because. If I have some have to figure out about a technical problem and I don't know much about it I can be as creative as I can't. I mean it can be very creative but I won't be able to solve the problem. So. I think it also helps to talk to other people. Trying to expose yourself to different ideas, different points of view because you can't know what.

Nicola: You said it was very organic. Yeah but you know like if you have had a hard time with something then meditates Do you often find that is a question about you are more focused or that you become more creative. Or is it too interlinked to differentiate?

Subject 4: I would say it's less anxiety towards. I mean I think if I mean I'm not I can't speak for everyone but for myself at least I feel like I have some anxiety sometimes and it's getting in the way. Yeah. So if I can be more relaxed and almost thicker I don't care attitude to it or if I somehow can put myself through meditation or just taking a walk or something you know more this I mean it's not the end of the world mentality then I think it is it helps yeah.

Nicola: That makes sense. I'm just gonna look at this to make sure I get all my stuff covered.

Subject 4: I hope I answered your questions.

Nicola: Yeah it's perfect, don't worry. You said you said earlier that your creative performance depends very much on the last couple of days too?

Subject 4: Yes. I mean I'm not. I mean if I would come up with some categories of what affects negativity I would say it's what I expect in the future to happen. It's kind of vague. If for example with before a vacation my mind starts to wander off into... like I'm going to take care of afterwards. Also if for example things if tasks pile up then I get more anxious and I feel like OK I have to be

creative faster. So and sometimes that doesn't happen. And it adds to the amount of tasks you have. And sometimes I just feel like I don't get having OK blood sugar levels and eating healthy and having exercises the day before also helps make or influences how I feel when I set on the task.

Nicola: That makes sense. Do you see your creativity... Now you seem to be able to you know consider your creativity in relation to the rest of your life. Where you able to do this before the course?

Subject 4: No I was I mean... I knew the word creativity and I never thought about the any concepts related to it in the sense that for example a quantity, of flexibility and originality. Or trying to - there is... I don't remember exactly the whole thing. I only remember there is an article and there's was this wheel of how to take ideas for example you just take one idea and it was taking the subject of the of the of what you're doing and trying to make taking it to different levels of alteration.

Nicola: Yeah. Abstracting it.

Subject 4: Oh yes. And there was. This thing like going from just slight alterations to the idea to just outright crazy and doesn't really have anything to do with what you started with.

Nicola: So the course made you more creative?

Subject 4: Oh yeah. And also aware of this and feeling that I mean there is you have you have a framework when you when you really need to get. Where you were when you really need to get to solve the problem. You can go through. I mean you can go from very small very small so an idea to write. Crazy things and you can do it step by step. You can also - I mean you can and you can take people through that and it's in a more organized manner rather than just brainstorming.

Nicola: Do you think everyone would be able to do this?

Subject 4: Oh yes. I mean we all we all have. We all have thoughts. Yeah I mean so it's just I would say it's more of a managing these thoughts and managing moods and. Just like what people think about because I think I mean in the sense this was kind of what they took the made us do before they explained what they what we went through.

Nicola: You think everyone has the potential to become like creative, to have a creative performance.

Subject 4: Yes. It's just I think it's more. Maybe a bit too biologic but it's kind of to also support your conditioning. Yeah. Because if someone for example my parents grew up in communism which was very. You take the step one step two step three and just there's no other way of doing things. And. It's kind of difficult but it's not impossible to get people. I mean even I am born after the fall of communism. I was influenced by the very step by step thinking and just one solution to everything. And I think with training you can you can become more creative.

Nicola: Do you think. Do you think that's a level where you can't get more creative. You think you are always capable of being more creative?

Subject 4: I don't measure these things. I don't. I can't say no I mean it really depends. I think you can always be more creative. I mean but. I'm sorry I don't know how to answer this question.

Nicola: That's completely okay.

Subject 4: I think it was if I had measurements of something maybe I could say I could become more creative but. Right now. I mean framing it in a sense of. When you have a problem. Where do you stop for example - where you give up on trying to find solutions. I would say that I do feel more creative than in the past.

Nicola: Do you feel more creative than you did during the Creative Genius course.

Subject 4: Oh yeah. I mean I felt like while I was doing the course it didn't really affect me. It affected me after. Yeah. And just like that it's actually I mean I'm not sure if I how other people are against. But I work for myself. I don't I'm not sure if it's the best thing in life to have had this but I feel like... I had a course and just after a while, things start to cement in my head. And then I start to get it like Oh so that's what they meant back then. But I'm already out of that environment and doing something different. But I do feel like it happened more after I finished the course because during the course I was a bit concerned of doing everything and doing it right. And I know I'm kind of doing keep doing it also of course mechanistic. Yeah. And when I was home and when you're relaxed and doing things that don't really didn't have such a big stake. Then I felt I felt that it. Really impacted me. I was just finding new recipes. Just joking with people more often and finding a crazy joke or something like this or even like talking about business or stuff like these trying to link all sorts of maybe different or very far away concepts together.

Nicola: What about you know I'm fine for ten years now. How do you think your creativity will be?

Subject 4: I can't say. I don't know. I hope better or at least more informed by my experience in the workforce and by whatever I will be reading in the next 10 years. But I you know I hope it's going to evolve.

Nicola: If your boss comes tomorrow I'll tell you hey you have to do this creative task you have today to do it. How would you do it like in all practicality?

Subject 4: I would try to find a place where you're not distracted by things. I'm trying to put down whatever they try to break into tasks and trying to make tasks for example like half an hour one-hour tasks with breaks in between. Because I really found kind of the heart you could take during this Creative Genius semester. I didn't really take the walks and stuff that they were proposing with right now sometimes it's amazing to just take a walk and come back to whatever you do. Yeah so I try to just try - In a sense it's not because I know it. I don't think about it like I had the course and going to do it as in the course. It's just the things we did in the course seem now very sensible solutions to these. So I just try to break things down into tasks and also. Make some buffer time for... Just letting my mind. Go loose. Or just be unfocused.

Nicola: What does it do for you to unfocused your mind?

Subject 4: Surprisingly come up with crazy very good ideas or just things or solutions to problems that I never really thought I was focusing there and it didn't happen. I what I mean is this is the anecdotal thing but yeah I mean I went in wash the dishes and started cleaning and then I just laughed at one point and I got an idea. So yeah I mean, it in a sense. I mean if you put it in a framework and in the book sometimes it seems like you do this. That happens. Yeah its but when you actually experience these things it's just like how things are supposed to be and. Make sense then.

Nicola: Come back alright. If you had to do like you said you would do it and divided up and then have breaks. What would you do in the while you're working on it. Would you use the tools we learned of the Creative Genius course, or?

Subject 4: It depends. I mean I do recall using example that a thing like for example if you have to come up with ideas it's always good if you can come up with it as many as possible so you have more

to choose from. So when I was thinking about things just. I mean yeah know. The short answer; Yes I do use some techniques from the Creative Genius. But some of some of them I would want to say I can recall what the techniques name was or something else. It's just it's just something that I'm trying to think of what options do I have in my mind in regard to this. And then I try to... Okay. I thought about as many as I can.

[Interruption]

Subject 4: Okay. So I don't really remember the name of a technique or something this but. Just think about. Okay. I thought about. As many things as I could. Let's try something different. I'm trying to think about turning it on its head or something like this or what does this. What was what would this look like in biology or what would this look like in elsewhere. I'm just trying to. Not get stuck on a thing.

Nicola: Do you feel that these tools... One thing is that they help you in this specific situation to evolve on the idea. Do you find that they also have an influence on your ability to be creative.

Subject 4: Yeah. Yes. I mean. I would say yes because it's... it takes out the anxiety of what am I going to do next. If I set a task or not. If I set a task I come up with as many ideas as possible. That's what I'm going to do and not think about whatever is going to come next. Because I think that's one of the killers of coming up with ideas in the first place. Okay. I mean that thing with being present here now.

Nicola: Something about the focus?

Subject 4: Yeah. Yes. Yeah.

Nicola: Yeah. All right.

Subject 4: Can you. What was like Can you ask the question again.

Nicola: Yes I asked these like specific tools. Know we get like for example the picture cards or something like that. You know one thing is that you know you say they help solving your creative problem. But do you also feel like they did have an influence on your ability to be creative.

Subject 4: I thought I thought it was something else. Sorry.

Nicola: But yeah. Uhm. Do you then?

Subject 4: I haven't used the cards. But I do use the techniques of thinking about problems trying to look good them from different points of view.

Nicola: And do you feel like this. You know does it have an influence on your you know your creativity or is it just helping you solve the task. I would say that so.

Subject 4: Yes. I mean is insane. I mean I can't really put a finger on where my creativity is. Rather than that I think it helps with you know not stopping at a point where you feel like you don't have any more ideas.

Nicola: Right. All right. I actually think I have the answer to all my questions now. So before I go further; Is there something you would like to add.

Subject 4: I think I just think everyone should take a course in creativity and at one point. I think it's good not everyone's thinking it's because you have an advantage. But I think the world would be a much better place if everyone was aware of all these theories. Although even if they took them in a more condensed way for example an online course. Because here we had six months or five months to be aware of them and then tried to apply them and then defend something you did with them. But even being aware of these categories I mean they're not real things but there is it's kind of ways of organizing our thoughts and I think it could. Mean the world would be richer. Yeah because we're kind of we can say we're losing on you we're losing out on everyone who thinks you're not creative. Or. Or anyone who gives up and just says oh God life is just like this you can't do anything about it.

Nicola: It seems as if you... You know, see creativity as very linked with personality.

Subject 4: Oh yeah. Yeah exactly. Actually yeah. I mean it can make you - if you if you can't if you only can imagine one future then you know it's depressing. I'm gonna be depressed or just you know just give up. And if you can think of. Or at least if you have the feeling that there is something more to this than you're going to keep your optimism up.

Nicola: That makes sense. Do you have anything else you want to add?

Subject 4: I don't know.

Nicola: I'm gonna tell you a bit about what I'm looking into them. One part is generally long-term effects of creativity courses because there's not a lot of data on it. There's a few and I'm basically just want to check if people are still creative after X years. That's one side. The other side that there's almost no data on is about activating your creativity. So there is some tendencies in articles and research that sees you know you have creativity training but then you also have things that can activate your creativity. For example meditation that you mentioned it's like it's about you know getting in the zone you know. And so I'm trying to define this a bit further, this term of activation. And I'm especially trying to see if people are more creative right after finishing a course because their creativity is activated. And you know. So you know most people will do this you know like you. You take a Torrance test and you take that course and then right after you take the Torrance test And I expect that sort of like you know your creativity is very low then it increased very much because you are taking the training and it's activated. And then your creativity like the activation is a temporary thing. But we only know, like the measure right here that people are very creative. Does it make sense?

Subject 4: Yes I understand. Yeah.

Nicola: Interestingly what I've found so far is that everyone who are taking the course is activating their creativity. So this this is my assumed but what I see is people either like this or this with their creativity because you know everybody like you see it as connected to their way of thinking now.

Subject 4: Yeah I think so I feel it's kind of um. It's for example if you have if you're running or something and you get taught the new technique of keeping your leg or something or just moving your hands in a different way and it helps you get the better results. I feel this is almost kind of the same thing. Everyone can run. Yeah. Some people have better technique. And in this also creativity. I mean we all studied something and we have a background in that. But if you add creativity to it you can maybe approach people from other domains in a more open way rather than just I'm with this you're with that. So we don't really have much to talk about. Yeah I mean in trying to realize that everything in the sense... I mean this is cliché but everything is connected. Yeah. That thing. Yeah. I mean if you want to get a job and you want to do. I mean you and you want to be in a startup or something and have to wear a lot of hats. So I'm trying to even if you don't know any physics or something or you're not a technical person you can... It's not it's not. So it's not like it's still made of

words with different words. Yeah you have to get the or at least a kind of a systems perspective or understanding of things.

Nicola: The essence of thing.

Subject 4: Yeah. Yeah. And I mean I feel like Creativity helps you with this because it kind of relaxes your mind this like oh chaotic I'm not good at this I can't do this. It's you should rather be like I can learn; I can read it you know just listen to people. Yeah. But is this really nice. Think you're gonna think it's gonna be some interesting things. Maybe you're going to get cited.

Nicola: Oh yeah. Yeah I find it very interesting at least. Yeah. Anything to add.

Subject 4: No. No.

Nicola: Then I'm gonna turn this thing off.

APPENDIX XIII: INTERVIEW SUBJECT 5

Nicola: Maybe you can you tell me a bit about yourself.

Subject 5: OK. So I am from Nicaragua. And I was studying a masters on information architecture at Aalborg university. From 2014 to 2016. And then... So I decided I decided to take the Creative Genius semester. So I guess it was the third semester. All right. That one that you're supposed to go to do is internship or something. And so I asked for the transfer. So since I came back to my home country. So I came back to my home country I what I do is... So I work in user experience design and research. I do a number of wireframes mean a lot of mockups or Web sites application mobile applications and dashboards and like. Web platforms. I also work. I also work going for a digital marketing. And in some communication. Okay. So I started I started my career back in 2000 or 1999 2000. So I'm 37. But I so I started my career in 2000. I was a journalist gaining in some corporate communications, Development Agency. So doing social projects right for a United Nations and in law and other government or an agency or being in the United States government. And so I so I at some point I started doing a lot of digital things and I founded my own company. And then I decided. To go to Denmark. Just because I wanted to study in digital. And so yeah basically to study digital. And it seemed like information I could get you didn't require me to be like a tech-guy. A digital programmer. And so that's what I did. Yeah. That's I will say it... All right. That will be like a professional overview.

Nicola: Yeah. All right. Well how come you chose the Creative Genius course then?

Subject 5: I thought it was a great opportunity to... Well personally I wanted to. I wanted to experience to have more networking and experience having like a program with other people from you know like people from other Masters. So this master was open to all of the master's in Aalborg University. And the description sounded cool. But I have to say that I think for - something that drove me to it was you know this type of thing was going to be multidisciplinary and it was going to take place in the in the main campus. My master was in close to the harbor, to Aalborg harbor. So in a sense I wanted that and I have to say well I. So it really surprised me because I mean I really liked and we know the time I spent there. At the time I didn't think about it that much but I think that for me it was a great opportunity you know to say as I told you before I do a lot of wireframing and a lot of mockups so I have to think about new platforms, changes we can make to them, to visualize

and you know visualize new functionalities or do to help or you know help build a new system and innovation how people could use it. So I didn't think about it like that at that time but from there you know like after I studied or I spend the time there and it was a great opportunity for me to do.

Nicola: So you use it a lot in your work you have now?

Subject 5: I do I actually I think I should be a translated some of the materials to a Spanish to use them in workshops. And so I am also involved in the WordPress developer community here in Nicaragua. So I use it to do workshops to show people you know, this is a creative process and you could do this program.

Nicola: How did it go, the workshops? Did people like it?

Subject 5: They did. Since then, I have used it with companies and with other companies. I mean not that many because I have to say that here in Nicaragua they look at you a bit... Think you're crazy you know talking about creativity and... You tell them about these exercises and so CEOs and owners of companies here they say they look at you a bit crazy. So yeah. So whenever I have the opportunity I do in in this this past year I also tried to help Christian [Christian Byrge, professor at the Creative Genius Course] doing some translating the course to Spanish - some of the materials for... But it was not great... No it wasn't... It wasn't the Creative platform; it was this thing they did. It's called 200 days of creativity or something. So I did. And for me was the opportunity to do translate more things into Spanish. And for him it was an opportunity to of course have it in Spanish. He was going to do a workshop with features I think in Spain.

Nicola: How –

Subject 5: Eh - Sorry sorry.

Nicola: No no, go. What were you saying?

Subject 5: No I. No I was just - It's just I was just going to keep going but I talk a lot.

Nicola: That's just nice. Lots of data. So that's a good thing.

Subject 5: Okay. No I'm ready for the next question.

Nicola: Oh I just wanted to ask you said you did these workshops but in an environment where people weren't always initially positive. What happened then when you did the workshops?

Subject 5: I think at first they were a bit shocked because you know, you have the 3D activities and the 3D tasks [different exercises utilized in the Creative Genius Course]. So, when you do the activities, it's a bit weird because you are, I don't know, thinking about future scenarios and stuff like that, and crazy stuff and walking into the dark forest [an exercise used in the Creative Genius Course] and stuff like that. So people react a bit... They think it's a bit weird but then when they do the task, and they see that they can come up with more brain writing and brain brainstorming individually and they start writing these ideas on their own post-it. Then they see that they're with these stimuli, they can now create more diverse ideas and just more ideas. Right. I think that's actually one thing that surprise them in a positive way. And I forgot to mention - which I think it's very important for you to know also; my thesis, my master thesis, I used the creative platform also because what I did was, It's a bit long but it's basically how a creative process can help build a cool inside environment for mobile applications or information architecture mobile application systems. So what I did was I collaborated with four or three startups in Aalborg and in Copenhagen. One in Copenhagen and two in Aalborg. And I did workshops. [Inaudible]. And basically what I saw was that... Well it was to experiment right now. What I found was that when people are using the creative platform, they judge less which is one of the things that the creative platform says that it does. And creates an environment where and where to say they are doing things seem to be that since they are doing things individually, there is less judgment on ideas, and people go a little bit further, and a little bit - the ideas get a bit more diverse than you know in a traditional workshop or participatory design. Yeah I guess you could find my thesis, although I set it up to private. But. Yeah. I thought it was a great experience and that's what actually made me think that it could be something useful here in Nicaragua.

Nicola: And the things you're doing in Nicaragua are they based on the Creative Genius, or have you, you know, twisted them, changed the method you used or is it taken out of the Creative Genius course?

Subject 5: No, I basically use the same activity and tasks. And I tried to follow the methodology. Well here I think I will say that day that that the difference in culture are not that evident. So I will say

that some of the some of the activities are a bit... look and sound a bit weird because for example let's say you say you; find a partner that has the same temperature of hands as you. So here in Latin America you have a sense of personal space, that is bigger than in Denmark, I would say. So you are touching someone's hand and someone that you don't know that well it's kind of weird.

Nicola: Impolite.

Subject 5: Yeah. So. So you. So you have to do changes like that. So instead you say, okay, find a partner that have the same kind of shoes that you have, the same socks whatever.

Nicola: What about you do you use these tasks yourself if you have you know to work with something? You know your mentioned that you use them, can you walk me through the process of it. What do you do?

Subject 5: OK so I think that I think the connection got a bit stuck there but if I heard you correctly, if I use it in my day to day, let's say, or in my projects. I wouldn't use the methodology like, wouldn't I wouldn't follow workshop methodology, let's say. But I will think of different users, for example. So I'm thinking that way it's like using the person's card. And also I try to think about different and like visual ideas. And so that will be like the different stimuli. I think it's the I will say that it is true when they see what they are saying that in their books that if you if you get there you get to a place where you feel comfortable with the methodology and you can use it without the cards. Without having the actual exercise card there. One of the things I do these workshops. Some of these workshops I do it for free just because I want to. For me is also like a like an exercise. So I try to do to do that as part of the exercise. I really think that helps. And so especially you know because I try not to. And when I have a project I try not to just copy some other Web platform and try to make it the same thing. I sometimes I try to - Well of course that's easier. But I try to think about functionality things that are not so obvious. So yeah I mean that's how I use it.

Nicola: You said you use these you know when you do the exercises are there is training for yourself?

Subject 5: Like I get involved because sometimes when you don't you don't get the amount of people necessary. So I get involved in the exercises as well. So to work with partners let's say when you when you have to work with partners. So I think the opportunity to be left to work with a partner and do also some of some of the some of the exercises although you know some of them are an

individual and then of course if you are doing that we're hoping on an idea or choosing then maybe and stuff like that. I don't get involved because yeah.

Nicola: Do you see these as some method of keeping your creativity, you know like does it make your creativity bigger or is it a method to keep it alive or like you know. How would you see this. You know this training?

Subject 5: I will say I would say to keep it alive. Yeah I got it's kind of like a reminder. Right. Like a reminder that that you can. There are stimuli all around us. And it's just some way to remind myself that they are that producing more ideas can get you to produce divergent ideas which are not... It's just not it's not something that comes easily or even... So it's a way to keep it alive.

Nicola: What do you think would happen if you stopped doing them entirely, the creativity exercises you think your creativity would diminish?

Subject 5: I think you were... Yeah. Well to be directly will say yes. But to have a more elaborate answer. I will say that it is something that you have to train. You know like exercise; you know like everything else I got that cognitive process you have to exercise and of course you get to feel more comfortable as you do it.

Nicola: And do you see your creativity... Are you more creative now than you were right after the great Creative Genius course?

[Interruption]

Nicola: What did I ask you again?

Subject 5: I think we were talking about something like I feel I need to exercise at work?

Nicola: Yeah yeah. You said that you see it as something you need to exercise.

Subject 5: Yeah. Yeah exactly. And. Well right. Something else that I guess you think could be relevant to this conversation, is that, for me at least, I think it has changed my way of seeing and creativity, as I mentioned before I have worked with communication for a while, in journalism also, like content creation. And I always saw creativity as something that strikes you, you know like a thunder, that strikes you, and you get creative somehow. And in this Creative Genius program made me realize that it's something that you can also exercise and grow in some form that I have got

different you know different things like my master. I thought it was a relevant subject to kind of combine what I was studying in the creativity field, and now I'm going to study another master in Estonia starting this fall, in human computer interaction, and one thing that I have a... I have this idea of working with systems make it easy for people to collaborate, and I think of creating a creative platform in some of these activities and tasks. They help you collaborate with other people without thinking too much on... you know... on things like you know... I'm the boss, or I'm an expert on such and such, and you know... the equal or not. And I think that's very important for collaboration, so just do that way, cause that way to say that... the Creative Genius program really had a deeper impact than I thought.

Nicola: I can tell you so far, everyone I've interviewed have that feeling. So everyone say that the Creative Genius course changed their way of thinking.

Subject 5: I mean I can totally relate to that

Nicola: Yes. You said that the Creative Genius course changed the way you see creativity, from something you know... the lightning, to something a bit more... Yeah, that you can train. Can you define how you see creativity a bit further?

Subject 5: Sure. Let me give you a little bit... No I wanted to say philosophical, but...

Nicola: yeah go for it.

Subject 5: Yeah. So one thing, or one thing that I have had recently, is that in countries like Nicaragua we are trained to do a job on these repetitive... So a country like Nicaragua, with the economy that we have, here it's the second poorest country here in Latin America. And so we are trained to do a repetitive job and then jobs and these countries, more like a country where what's important is the natural resources not so much the services and more elaborate progress. So what I'm trying to say is that when... I think to the ability to work on complex problems which by the way I see creativity in working complex problems & finding answers that are not so obvious, it will be a time in the future... an economy like the one in the Nicaragua or the one in Denmark. So in Denmark the education system tries to train people to solve problems in school and in university and so on. So, a lot of the [indistinguishable] in using this type of programs in this part of the world. Is designed and comes from Denmark or countries like Estonia or countries like Sweden. Let's say Spotify or Skype

or whatever. And there is a reason for that. And I think one of the reasons is that because people are trained to work on complex problems and figure out answers that are not so obvious. And as and you know, artificial intelligence and so on, I mean the systems that are more capable of doing repetitive work than humans. So something that will define what a human is, is still to work on complex problems and try to find divergent ideas. I don't know if this makes any sense but I'm trying to... I think I'm going to in my mind. But that's the way I see it. So for me it's very important to, I mean to have the opportunity to see problems as complex and to be able to train to see different ways to approach a problem. So I think it's very important and that's why I. Since it has been a great interest of mine, let's say, But I wouldn't have had any of these if I hadn't taken the opportunity to study the Creative Genius semester.

Nicola: You weren't creative in the same way before the course?

Subject 5: No, what I will say. I guess a short answer will be... maybe not. [laughter] But another way of saying it is that, now I think the creativity is more important, because now that I think there is something that you can train, now I can see that it's something that... like if other people will train, then you will have more people capable of knowing a complex problem and for me... So, I now see an opportunity that I couldn't see before, because I thought I was, if you see creativity as something very special and just happens to a limited number of people, and it comes randomly, then it's difficult for you to see that it's an asset. Now that I see that you train someone and you can never look back, now I see that it could be an asset, a very important asset for a country let's say.

Nicola: Have you taken any other education in creativity after the course?

Subject 5: I have read a book, as I said before I did my thesis on that, I took the opportunity to read a about creativity a bit further, and I am always in the look up for articles in magazines regarding creativity and so on, like Harvard Business Review and other magazines. And I got this article on creativity, and I think two editions ago, because it's out like on average every two months. And so they had a couple of articles regarding that so... stuff like that I'm always looking for them.

Nicola: Do you find that these articles help you increase your creativity?

Subject 5: Not really. They just talk about how things like create... you know there is this process called design thinking, which is a trend. So everybody wants to use this, and they that is a creative

process. People think that: “ah this is design thinking”, And so these articles basically what they described, is you know how creativity is not design thinking, or the other way around. And so whenever I see articles like that I just try to share them with the people that I know, so they understand a little bit more, so I'm trying to, I guess I'm trying to drive a discussion or a dialogue about that subject, in a way.

Nicola: Do you think if someone reads these articles without having all the knowledge of the Creative Genius course, is it gonna look like... one thing is that it will give them some more knowledge about it, but will it also make them more creative?

Subject 5: No, I don't think so. Now I'm certain in a way that. You have to know what you're doing. One thought that is stuck with me from the Creative Genius program was that: “Sometimes when you read something and then you try to do stuff that you just read, that could be dangerous”. The theory can be dangerous in a way, because then you read your article and then you think you're capable of doing something, and that's not how things work in the real. So that thought was stuck with me. So I think whenever I share something, an article regarding creativity, regarding anything, I think it is maybe for people to realize that the field is very broad. You know it's not just something that it's called design thinking, it's a process that you can learn it by just reading an article and then you are going to be more creative. That's not true you know. So I tried to create let's say a conversation around that. But now I don't think that if I share it people will be more creative let's say, I don't think so.

Nicola: Earlier we talked about how you use your own creativity when you have to solve tasks. Do you have some days where you're more creative than others.

Subject 5: Yeah I kind of. Yeah I think I am. I will say that, when I am not thinking about the... too involved into thinking about the future or too involved in thinking about the past, so when you are in the present, that's when I am more creative, and I can get more stuff done, if I am doing a lot of social media stuff. Here in Nicaragua, we had a really really difficult year, it happens. We have a dictatorship, and so the dictatorship went banana crazy last year and started killing people. And so it was very difficult for the whole country to think about important things besides. So right. That's a very difficult place to be. So yeah. And right now things are a little bit better let's say. But the dictatorship is still there and people basically are in the same mindset. And I think when you are in

a place like that it's very difficult to be creative, because you're thinking about your well-being, and well-being of your family and the people that you care about. It's a very difficult place to be, so I will say that this whole past year, I think I could have been more productive and creative, and it was just because of that. But In on a personal note, I will say that I'm trying to be in the present and it's something that I struggle to do, and I think most of us do in a way or another, just because a lot of... you know... a lot of things grab our attention now you know, social media, Netflix and whatnot, So I think it's harder and harder for us to be in the present. If it makes sense.

Nicola: What do you do to stay in the present?

Subject 5: So I have functionality, in my watch, that tells me to take a deep breath, and to concentrate to concentrate in the breathing for like a minute or so... every... I don't know it's a bit random. So, I tried to do that. I tried to stay away from social media when I feel like I need to get stuff done. Yeah, I tried to do that. I mean, as I said this is very difficult, it's amazing how, like I sometimes I feel like I'm losing control of myself, like shutting down all these things. I could see it... I mean, I am aware of... I think most people are not. which... Right there... That's the difference between someone that is aware of the need to stay away. To stay in the person. To keep away or whatever makes you not be in the present, and someone that is just kind of going with the flow.

Nicola: Do you find that these breathing exercises.... You know when they make you stay more in the present, do you then become more creative?

Subject 5: I think being in the present helps you. Yeah for sure. to get stuff done, to think about what it means you know not to do things like in a robotic way, I don't know. I think. especially If you are doing a mockup then they sign something, then you have to be really... I think that you have to be focused on what you are doing. Thinking about if there are any scenarios how people will use it, and thinking about different you know... So it really requires you to be... So I think it's important, if you are not, if you are not in the present then you are doing stuff just... copying or doing... just because you need to get stuff done, or out of the way. And I think so. I mean I had a thought about that in that way. I have tried to do these meditations, like the ones you are doing in the Creative Genius program. Where you know that you are sitting in that chair and then you hear this recording saying now you feel your legs doing bla bla bla. And I have tried to do that but it looks a bit weird when you are in the office. [laughter]

Nicola: What about the times you have done it? Can you feel a greater benefit from that compared to the breathing exercises or it gets too conscious?

Subject 5: I think you go to a deeper level of the present let's say. I think everything gets a little bit quieter for a while, for you know, the breathing helps, because also things get a little bit quieter. But the other exercises, the meditation exercises are the way you better... But those I do them less often, I do them more like when I am in my house, I am all by myself, otherwise my wife will think I'm getting a little bit crazy.

Nicola: You said, "a little while", like you think that these exercises are temporary?

Subject 5: Yeah. I do. I think the more often you do them the benefit builds up let's say, that way you can see it, you can control it and at least that was my experience. Last year I did a lot of those exercises, more often, and because I say I said we were in a difficult point in difficult times. I thought it was important. But I don't think that's something...let's say for example I do a meditation exercise right now, and so right now it's the middle of the day, I wouldn't expect the meditation to help me go through... to behold the rest of the day, without thinking that I need to and I have a deadline tomorrow and then a deadline in four days and then I have to get more money to such and such and I have to start my masters in Estonia. So I have to get things ready. You know, things just start like going crazy with your head.

Nicola: You think it's the same for the creativity exercises. You know if you do these picture cards or something, so your creativity is... you're focused on it. Is that also temporary in the same way?

Subject 5: I think, I have seen it with my workshops. In the moment that we are doing the workshops, I see people more collaborative, they're more focused on what they are doing, and they are trying to get more ideas. And so, I'm doing or I have done several sessions with these start up here where I live, and so we have done in the past month and a half, we have done red carpet exercises, maybe like eight sessions. So, I think the first two sessions people were a little bit... you know, it was a bit a bit difficult for them to do the exercises, and the last the last session we did and they were...

[Interruption]

Subject 5: Yeah. So, I don't know if you have more questions?

Nicola: Yeah, I was just asking you about the perceived benefits of creativity exercises are as temporary too. I never got to the final, you know, you're telling me about how you use it but I never got an answer.

Subject 5: OK. I think I can keep builds up. So, what I was trying to say is that for example with this company that I have done around eight sessions with them, so for the first couple of them where they didn't know what to do, it was kind of hard for them. And then the last session we had... yeah... they know more, you know, they are expecting, they see the picture of the red carpet, then they know that they are going to do an exercise. And I think thinking it builds up, if you exercise it, and you do exercises often, I think you have more benefits than you think, you can come up with the ideas on command, I mean I remember, you know in the program they talked about it, about how you were going to be able to... to come up with ideas on command, and I thought it was a bit ambitious. I think it's true. I mean I think I see it myself.

Nicola: So I don't have any more questions. So unless you have something you want to add

Subject 5: No no. Just still I just wanted to say that. Just feel free to contact me and to have further questions.

Nicola: Yeah I will.

Subject 5: For me it's very interesting that you said they you know that you have talked to other alumni, at the program and I am curious because as I said as I said before, this is an interest of mine also. For me it is interesting to know that other people think the same way I do. I wish there was some more active community let's say. Or I wish that there was more materials in Spanish, like these two books that they're part of the program that they have, they are in English, I also think that the big the ambition could be better in English, and the editors could have done a better job editing the English version. I wish there was a Spanish version so I could share it with more people. Especially when I do workshops or do the exercises and work with companies, I think they could get more from their books if they could read more in depth of what they are... Of course I explained them, but instead, they were the same... I guess that's so the only thing I wanted to add.

Nicola: Thank you.

APPENDIX XI: INTERVIEW SUBJECT 6

Nicola: All right. Well in that case when you start out by telling me a bit about this.

Subject 6: OK. Yeah. Uh. I'm Subject 6. I'm from Denmark. Living in Denmark working for a company called [REDACTED]. Uh I have A long life behind me. I'm almost 50, So I've been taking a machinist education engineering education and been pretty much occupied. With engineering tasks all my life, and it is about production equipment and technical stuff, and also a little bit with financial calculation and getting investment approved. Beside that I'm a very creative, active, nature loving person. I like to use my hands, like to build things, like my house or my shed or do things on my car; be in the water, surfing, yeah swimming, whatever. So uh. And recently I joined the Creative Genius education in Aalborg. And been graduated in January. Uh and I've been very satisfied with the education. And it was a very good combination to the job I'm in. I've been doing other types of project management education and I have been doing a lot of planning and executing plans, and I thought I was quite good at a lot of things. And I could combine some of more let's say tough and linear processes, like you would normally expect an engineer to do, set a plan, follow milestones and all the things. But I found out that this job and the way I did project management was very solution oriented and forward oriented. In a lot of things. And that was blocking some of the creativity that is needed for really getting new ideas on the table. And I was able to use these new tools from the Creative Genius education in my current job, and some of them were very useful some of them I did not use. but I think this... alongside with his education I read books, and they was a recommended during the study, and I found out that people are often afraid of opening up and let loose, and this positioning and judgment and being more free was very important to get the crazy ideas out, because if you put 5 alike engineers in a room, give them a very short time, they will come up with a solution, and they will start executing, if there's a requirement for doing that right away. But what I could see was: if you are not building a standard product, or going the beaten trail, you need to do something else. So in that respect, this opening up the window, looking broader out before making a decision was a really big help for me. And I have been able to use it very effectively since, along the education, [and] also after it, I find it for me, a very good supplement to what I'm doing today.

Nicola: Can you try to walk me through what are you doing? when you get a task at your work. which methods do you use?

Subject 6: I can describe a task I was handed over first of November last year. That was a project that was supposed to bring in a collaborative robot. Are you aware of the term collaborative robot?

Nicola: I don't think so.

Subject 6: No! But a normal robot in an industrial sense is a fast-moving strong thing you put behind a fence, and then you say people outside the fence “robot”, inside the fence... Safety is the fence basically. If you talk about a collaborative robot. It is something... It's a robot that is sharing the same workspace with a person. You could say it could lift the heavy part. The operator could do the delicate manipulation of fitting in parts and. Stuff like that. So it is a mechanical helping hand. But it is a device that is relatively new in in the in the market. And a lot of people are trying to use this collaborative unit in production and there was a project started more than a year ago. One of my colleagues was a project manager of this one, and the scoping of the project was just production equipment and another one put in the club or two robots make it work. And He collected them a project team, with a good experience from a long time into the company and in the industry and knowledge about workplaces and industrial robots. And the team of seven were kind of trenching a little bit, meaning that, we need to do it like this, and another one: No we need to do it like that. But, they were not able to combine their knowledge into a solution, because they were stuck in all of way of looking at automation. And because they were really struggling about finding a concept for a long time they were starting to not be productive, like you know, he doesn't want to do what I'm doing, but he know my phone, call me if you want to go on. And given other circumstances this project manager was assigned to another task, and my boss asked me: “Can you take over this area”, and I'd never been working with these kinds of robots before, and I cannot program a robot or anything. But I have, a big knowledge on production environment, And I said OK let's get started. I need to get up to date. So I went around, talked to everybody, also the old project manager

[Interruption]

So I was assigned to be the project manager on this new project that's been going on for a long time, and people were a little bit worn. They were not collaborative in very good spirits, because they were approaching the task as it was a normal standard task, where you are giving me this task. I'm

doing this. You are doing that. And I have this is dictation for you. And everybody was kind of crossing their arms, and I use it to explain Like: if you are offering something, like a shed for your garden, you know that what the carpenter will do, you know what the electrician will do, you know what whatever... Because you just need to agree on the basic size. But if you don't know if you are building a shed or an airplane or whatever, it's very difficult to get people to buy in on the project because they could not use the experience they used to have and how to, because there was a brand-new technology in place. This robot was new to everyone. There was of course a guy who was very good at programming the robot and they could buy it. But how to make the concept of how people should work with it. It was getting too complicated and too expensive. And then it was ending up being a poor solution of the normal industrial solution. So now it's just without a fence it's more expensive. And what is the benefit? We don't like it basically. So my first approach was: now we are going into a phase where we are not looking for a solution right away. We are not making any decisions for the next six weeks. Now we are trying to understand this task. We are opening up and seeing what can we put on the table of new ideas and old ideas and crazy ideas. How can we do it.

Nicola: And that was the Creative Genius course that made you...

Subject 6: Yes, And I did not do the Creative Genius training. But I set up some ground rules for how to participate. And one of them was: if we are brainstorming and having an idea, and the idea is we are building a red boat. Nobody will say no to this idea. If they have an idea of building a blue car it's fine, we'll take it afterwards. We don't need to discuss whether a blue car is better than a red boat. Because if you've got an idea we will let it live as long as we can. So you are going to say yes to this one. And if you're not saying yes, don't say no, because we are trying to mature things, and every time we had an idea, we started of course with posters and a process like that. And I said OK, we need to sketch it or describe it. So of all the ideas. Every time there was an idea, I said OK I'll come back to you. And every time someone will say let's take another direction, I say OK fine enough, but firstly we pop this one or... Because people are very eager to go into the solution mode right away because now they have something in their brain. And we start to make a chart of all the solutions. And some ideas was just a part of a solution. So maybe in the interesting ones there was 10 ideas that were brought into a solution. And along the way there was coming mechanical system, a vision system. How the operator will handle... and a lot of things. And along the way I stopped making calculations and I did not make any decision about anything, but all of a sudden, I could see

we were very aware that we cannot use all the existing process types and helping equipment that we used to use. So we find out all these mechanical systems that are very good for industrial high output robots, they need to go. We need to use a vision system. So I said OK, now we are going to find a solution that fits in between the normal manual workplace, and the normal industrial workplace. We are on purpose sitting between two chairs. why we're sitting there? we are going to use and reject part of our knowledge from the manual workplace, and also to use and reject some of the knowledge from the industrial solutions, and I came up with the idea that OK basically we want... I suggested, we need to look into this vision technology to find parts in a random place, as the mechanical side should be as easy as putting your stuff on the conveyor belt in a supermarket. And the first idea was: we don't want to use the operator. But that was basically the old normal truth about industrial solutions, where you're trying to eliminate all the lifting from the other operator. But then we said OK, how about reducing 80 percent of the operating time, so his job would be much smaller and easier. And the mechanic... If you're not familiar you can compare to just putting the past random on a table, compared to stack them very neatly into some specially designed magazines, because a normal robot would like to have the part very well-designed magazines so they can pick them very precise fast. And very slowly the team stopped not fighting for their original approach to this task, but they are saying: OK, we're actually getting that... none of us is right, none of us are wrong, we are all for it, tipping in with some of our knowledge, and we can see we are getting some of our knowledge used, but there also is something that I... when it's coming up I will say something like: Now you're trying to use knowledge from the old regime, that is no longer valid in this regime. We need to rethink the way we look at this technology. And because of that, we managed to come up with a totally new concept and actually the concept was almost given in one of the first idea that came up. But it was evaluated at that time to say Yeah but we have so much problem with vision systems. But that was also based on knowledge, on old vision systems. So it was parked for a long time and we matured in other ways, until we realized OK we've been on a dead-end road here. We need to go back to and look at it from a distance again and then, oh it became obvious that this vision technology could be implemented much easier today, than previous. You can compare compared to... if I I'm talking to you ten years ago I'd ask you to take a good picture. You would go and get your camera and go out and take a picture. Because what else would you do? OK, If I did it five years ago, you would say OK, I got a camera in my phone, but the

discussion five years ago would be: yeah, you've got a camera on your phone, but I need a really good picture. Please bring a digital camera. Now today. And I know a little bit about camera, because I've been putting quite some money on it during the time, but now I don't use them any longer, because my phone camera is so incredible, it is so cheap, and high quality, but it is replacing, and I said to the team: we cannot rely on old knowledge all the time. We need to reject old knowledge sometime and you know, one of the guys was a 60-year-old tool set up in working with a mechanic for forty-five years, and he knew exactly what to do. So a lot of times you'll say something like oh just give you the task I'll solve it. I said we are not giving anyone a task to keep it in the dark. You've got a mind. It's something you know you've got something in your head you need to form an idea. You need to visualize a solution. You cannot just say I got it all covered, because you cannot solve it alone. So every time there was some discussion or something... OK we're not making a decision. We are making a drawing. We are making a sketch. We're cutting cardboard. We are building a model. We're doing whatever it takes to make everybody buy in on this solution.

Nicola: Would you have been able to do it this way before the Creative Genius course?

Subject 6: No, no, not at all. Because then I said God damn it I'm the Project Manager, and I promised to be ready first of April, and that's what I'm gonna do, and if you don't like what I'm giving you, then you're gonna love a one-armed child basically. And so that is... It's been opening up this window of solutions so much, this process, and also in... from the Creative Genius one of the things that I liked very much, and I think I was the only one on the course, was these cards about... persuasion cards. Because the selling point of a project in the old world is the mechanical solution, more than what you can implement. But I said OK, it's not the best solution we're looking for, it is maybe the second-best solution that can be implemented and sold to everyone we're looking for. So sometimes when people are very idealistic and once they [say] "but this better you know, we used to do like this and it's gonna work" I said OK, let's see if we can sell it, Let's go to the shop for a manager, let's do something else. So I used it for the development of the idea, but just as much for the stakeholder management really, because your stakeholder is the key to approving a success. You cannot say I have a perfect solution and the perfect idea, and something, but nobody wants it. Only when it's on the floor and people are saying it is working. Then you will say "now it's innovation", it's not innovation or good solution when it's in my basement. So approaching this, the practical in a more open-minded way, and I'm a guy talking a lot, so I said to myself during a lot of

meetings “shut up, you shut up don't judge. Don't say nothing, accept it”. And that is the criteria that is really hard to live according to when you have an opinion on a lot of things, and you are used to making decisions and saying setting the direction.

[Interruption]

Subject 6: So it was about this, also being able to sell the idea was quite important. And one thing that I found out during the project, you cannot say to people that don't position yourself, because if they're in the mentality, I know what how to solve this job, and I've been used to doing it for a long time. And you can count on me working this way, then if somebody will say something that he's really against, as It's not going to work, it is very difficult to say to him: Just keep your mind, keep it in your mind, don't say anything, because actually he's very good at what he's doing a lot of times. So it's more a way of using his knowledge and let him say it, even though it can bring another person a little bit down by his idea. I found out that a lot of times, instead of having two ideas and make a decision which one is the better one. Sometimes it's better to say OK, why don't we say both, we are going for both now, and I can give a very fresh example. Last week I was saying we need to have a special grabber for testing something, can we 3D print it, and that guy, and he is actually sitting in Hungary said Yeah, I can draw and we can 3D print it, and then this old tool setter type of guys said: No I don't use 3D print, it's fashion, it's trendy, it's not working. We are going to laser cut a tree millimeter stainless steel plate that is working much better. And actually I am 100% on his side, it is a much better solution, because we know it's very stable it's very reliable, and I said maybe I'm not looking for the perfect best solution, maybe I'm looking for a very fast cheap solution to get knowledge on this 3D printing technology, Yeah! but I'm not going to put my name on a robot that is not gonna last for a very long time, and because he understood that we need a very flexible driver[undiscernible] tool, and that was what he was supposed giving me, And this discussion has been in a couple of meetings and a little bit in between, so I said to him today OK, let... because I totally support his point of view, that it is a very... it is the best solution that we know of here. But the new technology, where that is so cheap and have some much functionality, that we are not very good at using. Why don't we try to use it.

Nicola: That mentality is again something you wouldn't have done before the Creative Genius course?

Subject 6: then I'm looking for the most rational best solution, that will solve the job. And he was right, that this is... it's a bullet proof way to go. But what I'm ending up saying I'm going for both. I just don't want you to use much time on it, and it's not gonna cost us much money. Because it's not gonna be an art project that is going to be put on the conference hall of fame for best technician.

Nicola: Yeah, you just need to solve the...

Subject 6: I just need to see that, if we have a task, and it is the prototyping thinking. Just get it done, see it with your hands. And when you see it, then you will say OK, it's not perfect, why don't we do it like this. Then you start building on and other ideas, and so it used to work with metal and laser cutting of that... That he... And of course he would stick to what he knows, because it is going to work, because that is what has been paid for his entire life of delivering successful applications. But... and I'm not a 3D design or anything, but if you open up a little bit for something you don't know about, and just walking along the way, two things will happen. You'll get more knowledge on this new technology. But at the same time the guy sitting at the other end doing the 3D design, if that was his idea and he wants to mature it, or learn about it because it's cool, or because he thinks it's the best, or whatever. And you're saying to him: that's a good idea, probably it'll be interesting, but hey shut up, we don't need it, this guy over there, could you please draw that component for him, then you can scrap your own, how motivated will he be in the project? So on a psychological side, by not choosing or saying no to anyone, just saying yes to anyone, to both of them. Both of the guys are in the project, this little task here, is not the main project. It is something done with the left hand over there, it is not so important, but something I just want to try, so they get more motivated being on a team well when they haven't... I was very accurate on saying you could spin a look at a couple of hours, and you can also buy a little bit of component, but you're not going to build it perfect, because if they stop started building it perfect, they are sitting hours and hours and they are designing a state-of-the-art equipment. Because this was what we used to do.

Nicola: Yeah, well by making sure that they got heard you insure their involvement.

Subject 6: Exactly. And also to piss them off a little bit, I create a solution of cardboard and presented to them, this is this is my idea, why don't you like, oh come on. We're like playing school or whatever. But what happened, is they are so afraid of making suggestions afterwards, so right now we are in the middle of the project and simply being able to chuck this project down in smaller task, taking

some decisions and pushing other decisions in front of us. Because what is normal. If you are going out on a project and you will be measured very hard on delivery to time at a given time, you want to know what you are going to deliver. And I said, we are not on a time schedule. We are aiming at May, but we have more aiming at the right solution.

Nicola: Would you say that doing these things giving them, you know the opportunity to work on their way, also makes them more creative, because the... you know, more involved.

Subject 6: Yeah, think, yes, because, I'm channeling, I need to challenge the way we are thinking, because we are introducing a new technology. And if we're saying: now we are introducing a new technology, we're doing everything like we used to do, guess what, it's not new. It's just a very strange version of what we used to do, with just a new robot. So in the beginning of the project I was very aware of this concept phase of not making a decision, and having these workshops and loops of maturing ideas, and then sometimes, OK now we can make a decision on this part of the project, now we can order the robot, now we can do this and that. Because we know we can find a solution. Then will say but we have not decided on the grip of design, or we have not decided on this and that. I will say something like yes, but we cannot describe it a hundred percent, but we know the frame within which we want to find a solution, and you will say A, this guy saying B, I think both can work, they are not very accurate, if they're not decided yet so. So working at these different steps and postponing your decision, is very much a link to their way of thinking Creative Genius. Don't make a decision if you don't need to, and I have not been at all letting just the time go. I think we have been... we are very good, and very fast moving forward according to... and from the beginning I said to the team and my boss we'll do it in something like a half year, and I said: but I'm not gonna be measured on delivery time, I'm just making a plan, so you should not set your time schedule on what you can guarantee you deliver. And you should not make it so long that you know that you will not be in trouble, a little bit of pressure is fine, but give yourself some room to postpone your decisions. It means that we have also done some wrong decisions, and something is wasted, or we need to retool things. But as long as it's not wasting the money and time too much then. That's how it is, we're getting smarter.

Nicola: What about, you know, one thing is using your creativity as a guidance for others, how do you use it for yourself if you're stuck on a problem.

Subject 6: I'm being more aware of that. You cannot force a new idea in coming. You can approach the idea, and then you can focus on the idea, and then you can dive into the idea, but you cannot say OK, now I've got all the cards in front of me now, I just combine them. Sometimes you really have to be patient on letting the idea reveal itself in the process.

Nicola: Can you describe your process normally.

Subject 6: The process I used to have is having a lot of tasks at hand, and then I used to say that I always gotten one and a half job. So I will always be delayed on some part of the job. But as long as you are you are agreeing with your stakeholder or your boss, that now I have to put this one on pause, so unintentionally, I have always known that I need to time, to mature the ideas overnight, or let them come out. But now I've been more aware of that it's very natural, that you could not just focus more and... so I can say from the beginning, I know this is not a straightforward, where we just do what we used to do, I know this is gonna be difficult. So, I know that I cannot push too hard on this part of the project. So the scoping part of the project is to get into the concept right is very important that you you're not locking too fast on this. And I said to the team about this, the conveyor system for instance, we know we are going to show the conveyor system don't we. Yeah we see a tunnel. Yeah. So the conveyor system is not going to be a headache. So let's put it aside.

Nicola: And you do that for yourself too, if you have something that you are working on individually? You do the same as if you put things aside like that.

Subject 6: Yeah I have to. I have a saying that if it's worth doing, it is worth doing well. So I'm always a believer in putting the best into what you are doing. And I have always way too... no matter if it's in private or a job, I've always way too many things that I'm working at. So I'm very used to letting things sit on the shelf maturing itself. And sometimes it's just never coming. And other times... I can give you another example. We have built our summer house 10 years ago. And we are rebuilding it now. But we're taking a year to rebuild it. And some of it inside decision is not decided yet. With the wall go all the way to the ceiling, or we have to keep it off the ceiling. And I'll say I don't need to make the decision. Why do I want to make this decision now. Because I don't need it. I could just continue and also with it. So a lot of other details like what tiles are you gonna have what where are you going to place though heating pump or whatever. I say we don't need to find a solution. Is it here or is it there, is always the other side, we can always... don't frustrate yourself about it. And

I've just seen so many times that if people are saying oh no I have the perfect plan, let's execute it, and then they're executing it, and they're not re-evaluating or stopping along the way. And my wife is very visual on things. She cannot not imagine how it's going to be like this. So I know if I'm making a plan, I say we're going to put the walls like this, we're going to have these kinds of doors. We're gonna have this. She says okay maybe I'm not following you. And I can do it, but I don't like to do it because, there's no reason of doing it, because if you can...

Nicola: Step up and reconsider the thing and we'll be better.

Subject 6: You know I'm very comfortable of not making a decision. It is not a problem for me being in on security.

Nicola: Was that also something that came from the Creative Genius course too?

Subject 6: No. It's been like this all the time, that it doesn't frustrate me that if I go to a new place I don't have a hotel, my wife want to have the first hotel booked. Yeah we'll find one. It might be better. It's my mentality that it's gonna work out fine.

Nicola: Can you describe what did change then when you took the course? Like a lot of people I have talked to talk about how their creativity increased maybe after the course. You feel like this too.?

Subject 6: No I don't I don't think my creativity increased, and I tried these meditations and all that kind of thing, is it is not that the amount of creativity, it is the method of working with creativity that is giving me the benefit.

Nicola: So it's a process that you are taught that that helps you now?

Subject 6: Yeah. And especially this... Don't interrupt another person's good idea, even though you're cleverer or you have another solution or whatever, that's something good coming out of his idea. Just don't position yourself or don't evaluate what he's saying unless it's necessary.

Nicola: So you think creativity is a thing everyone has?

Subject 6: Of course, but that's not all I want to share. It didn't switch it. Can I have a half second break.

[Interruption]

Nicola: I want to hear a bit more about your creativity, and how you see creativity. So you just said that you think everyone is creative. Do you think everyone is the same amount of creative always. So it's just a question about the process.?

Subject 6: No, no, I think everybody is creative in one way or the other, but of course some people are forgetting to be it, and they're forgetting to use it, and by nature they are not using it very much.

Nicola: Maybe can you define how you see creativity for me? A lot of people will define there's a process. Other people will define it as a way of thinking or something entirely different. How do you define creativity?

Subject 6: it is about flexibility. It is if you are able to go around a situation and look at it, or problem or opportunity, and then get a more interesting output then the average guy, then I think you're more creative. And I think if you are playful and if you are opportunity seeking, and if you're not afraid of failing, then it will help you.

Nicola: Alright, but you said that the Creative Genius course did not make you more creative, you didn't increase any of these abilities?

Subject 6: They became more... I must say that they did not increased my creativity, because I always had it, and I always used it, but I'm using it in a in a better way now.

Nicola: More efficiently?

Subject 6: Yeah yeah. Is giving a better output and it's making me OK...Maybe you know, it is making me a little bit more interested in things that I did not feel interested in before and. And of course that you could say that is also about being creative, to be more open minded to things and say yes to all things, and I don't know if it... if because the older you get the more you put yourself in an auto-mode and do things, of course I don't go around being creative all the time because you know, kids and house and garden and blah blah blah. So we need to have an autopilot, but being aware that this is a... you can make some decision that you on purpose are not following autopilot in all given circumstances.

Nicola: Do you do that outside of your work with your kids or...

Subject 6: I'm trying to, I'm really trying to...

Nicola: What would you do then?

Subject 6: just slow down and sit, and not be told... because... actually there is one thing that I am not so happy with myself. That when my kids are... want to do something I would give them a logical sane explanation on why we are gonna do this. Oh like that, and the other day I was just say OK, let's just sit here we go to this tree house, and let him do the development of the game and the play, and is it ok as it is. It's very nice just to sit here out and just not trying to make a cool feature for him, just let him play with the leaves and the sand. So that the book about being a presence there in the moment. Did you read that one?

Nicola: Yes

Subject 6: one of the things that I'm intending to read it again and be better at being present in the now because that will help or side of your life.

Nicola: You find that it also makes you more creative? being able to be in the present.

Subject 6: Yeah. Because then you are stepping away from cruise control, or being... because a lot of people are. And I think if you look at the broader perspective on life, a lot of people are being stressed today, because they are seeing their perfect friends, perfect pictures on Facebook or whatever, and they want to have a car and a garden and a house, and everything should be picture perfect, and it cannot be, it's not important. Just look what is important. If you have lost some of your relatives, you know it is not important that your car is old or is it new or so. So I think that if you boil it down, if you can say it can be something with it. Finding inner peace and being satisfied with who you are in the situation you are, just looking at now and what is important, not trying to force it into a perfect picture not true.

Nicola: And you see all of this being linked to creativity too?

Subject 6: Yeah, you can say it in a way because if you are able to be open to the world and being more present in the moment and not try to put up your status or make your ideas the ones that need to be picked, like dominating their discussion all the time, for a reason, because you can always get a good discussion with someone if you don't agree but what is the point of it. Why not just let it be and say OK now we are just here, let's just drink a beer and relax. So that's why when one of my colleagues said that he was going to project manager training called "prize 2" ... Oh my God. That is

the worst ever way of living your life. It is our structure, all agreement. You are not going to get anything good out of that. You're going to be better at executing boring things [laughter] So, I don't want to go that direction. I want to go the other direction I wanted to be outside the box, better than executing perfect inside the box, that has really been motivating me to join this Creative Genius course, and I'm also right now struggling and trying to find the time of the money to forward this with more education.

Nicola: Have you taken other creativity education?

Subject 6: No. No I haven't. I've seen a lot of YouTube videos and Ted Talks and stuff like that. But it don't get to you the same way as taking a real education, where you're sitting in a room and some someone is taking responsibility on how you're sitting and what you're thinking about and you're focused on etc.

Nicola: what I experienced during the creativity course was that, you know, sitting all the time being creative together with other people being creative I felt very creative, obviously you know, and everyone I've talked to I felt like that, do you feel like, you know, the same amount of creative now even though you're not sitting with it all the time?

Subject 6: No you are getting a little bit lazy or falling into some of your routines and stuff like that. Of course it is difficult to be just as aware as like when you take the...

Nicola: But do you then do things to refocus yourself to be creative?

Subject 6: I would give myself a little bit of guide tools, I have put some posters on my screen saying "yes, yes, always yes, never no". And then also the sticker "postpone as long as you can, don't make a decision before you need to". Because I've been a situation where I've said we don't need to make a perfect decision we just need to make a decision. And that is, that don't fit into the creativity frame. And that only fits into this management executing... and that's fine. I think in some ways, but don't do it like if you were coming home from work, and you need to do shopping buy some milk and bread. Don't think about it forever. Just calm down. We don't need much creativity here. So it's not like I'm trying to be... yeah all this creativity all the time,

Nicola: yeah there is a time and a place for it.

Subject 6; Yeah exactly,

Nicola: Do you find that these stickers and so on, do they focus you then? Your creativity?

Subject 6: it's a reminder, but it is something that I reflect a little bit more on situation now than I used to, at this meeting situation. Sometimes I can say oh everybody is just sitting here positioning themselves, they don't even listen to one another, they know what they want, they don't what they need from one another, then they're just there. And it can't be a lot of waste to work like this. But you don't risk anything... if you don't risk anything or if you don't open the process a little bit, then you will very likely get a very predictable result. But unfortunately, that is what a lot of systems are requiring today. Like when we have an election or whatever, politicians, they are very afraid of loosening up and listening they are positioning themselves 100% that they are "I'm only gonna give this" and they say now we are cutting down on bureaucracy. But in reality all that they are making more rules and more measurement on all things. If know some, I'm sure you will know it[laughter]

Nicola: do you find that you have days where you feel more creative than others?

Subject 6: Yeah.

Nicola: What do you think? why do you think that is?

Subject 6: I think that I know how I can kill my creativity.

Nicola: Yeah!?

Subject 6: If I am sleeping less than six hours a night, and I got a long day of meetings. I don't book a time for myself. It can be in the work time but also the free time. I know that I'm gonna wind up a little bit. But on the other hand are getting more sleep and I'm also on purpose booking in time slots in my calendar, like for this meeting I booked in more hours than I was expecting to use half an hour, using a little bit more.

Nicola: Could you just tell me what would you normally do when you plug time for yourself?

Subject 6: I just blocking in my calendar.

Nicola: Then what do you spend the time on?

Subject 6: what I need to do for myself. And it can be boring routine jobs or something but I just found out that of course I like to service my colleagues around me, but sometimes I'm not just saying no is also... a good way of guiding yourself. Because if you're running around serving everybody all the time, then if you end up not making the stuff that you need to do for yourself, then it's not it's not good.

Nicola: So it's mostly about time you put aside to make sure you get your job done?

Subject 6: Yeah but it could also be my spare time negotiating a little bit with my wife saying that I think I need some hours off, on Saturday or Sunday which three hours do you think you don't need me.

Nicola: What would you do then? go work on the shed or...

Subject 6: Yeah. Yeah. Something like this or spend some hobby time with my sports,

Nicola: And you know when you get that time and do those things then your creativity is better?

Subject 6: Yeah. Yeah. Yeah for sure. Have you ever met a windsurfer? or a surfer before?

Nicola: Yeah I have a few friends who are who surf.

Subject 6: yeah and they are most likely in some days very positive and very good to be around. And then some days they are in the wrong place, and if they're in the wrong place because they are at the family gathering where there is good waves or a window or whatever too much, then they're stressing out.

Nicola: Yeah, and then you can't be creative?

Subject 6: No, you need to go and release yourself. And then follow these... Surfing is a passion sport. It's not very easy to fit into work or family life, but sometimes you just need to say screw it I'm out of here. I've been saving your point for a long time, now time has come to be an asshole [laughter] And thankfully my wife understand that I need to do it once in a while. But my family don't understand it. They think they can ask me a five month ahead. Do you want to go to brunch Saturday like this. And I said no I don't know! But what are you doing? I don't know. I don't want to know, I don't want to put it in my calendar, so on the family side I say I only want to have one appointment that weekend, don't invite me Friday and then another one on Saturday and then on

Sunday. I'm stressing, I need to know that I can make this negotiation with my wife that I get to go in the water for three hours now.

Nicola: I actually got the answer to everything I need now.

Subject 6: Yes

Nicola: Do you want me to tell you a bit about what I'm working on.

Subject 6: Very much.

Nicola: it's in two parts. One part is looking into the long terms effects of creativity training, there's very little on it in the literature and there's absolutely nothing about it that goes deeper into just making people do the Torrance Test. So you know this aspect about how people use creativity and almost everyone say that it changed their way of thinking and these kinds of things. There is nothing in the literature about it, so that's one side of it. And the other side is that I'm looking into how people use tools or activities to activate their creativity, just like you're talking with the windsurfing like there's a bit about it in the literature but it's almost never linked to creativity training. So I want to see if I can define this activation and then link it to creativity training.

Subject 6: I can give you a little example.

Nicola: Please do.

Subject 6: Like it was last Saturday. I said to my wife there is a skateboard park in Viborg. I need to go down a couple of hours because I used to be very active into it, and for the last years I did not do it. And when I was there, because I'm getting old and stiff and need to focus very much, for two hours I was only looking down on my feet and looking 10 meters ahead, and that was all I was focusing on, that wasn't some of my friends were there, and there was no wife no car no money no son. It was only this very limited. And when I came back I said oh you know it's just so nice to be there. at first she is asking are you getting hurt. No not today. And of course the success criteria that I don't get hurt, but just being able to harvest and focus on something that is so is so mentally healthy to have a passion for something that you go in and that's it. Now my score is set to zero again. Yeah. It is really rewarding for me to have stuff that I could do where I can totally forget everything around me. And I know a lot of people don't have something in their life, that they can

focus that much on, because my wife don't, she's just let's just go out and do something cozy, gardening, stuff, and I really like my family, but sometimes I really like myself for a short time.

Nicola: But, so far what research shows is that everyone is doing it even if they're not aware of it. So your wife who goes out in the garden is probably doing the same thing, this reset, this activation, this focusing in that situation, even if she doesn't see you like that.

Subject 6: Yeah, and I'm sure that other people will in my shoes say what you are doing now is the worst I could ever think of doing, so I don't try to convince them that it's a clever thing. I'm just saying that something is triggering me to do what I'm doing. But actually to take a little parallel again, if you're familiar with sports or things where you are failing a lot. If you want to do a trick for windsurfing or whatever you need to do it over and over until you get it on luck, until you could do it, but preparing yourself for making it or failing is basically a very important feature in to have, because if you if you are very afraid of Oh I'm never going to fail, I would say OK if I should live my life never failing it would be a very boring life...

Nicola: there's the same with creativity...

Subject 6: Totally on cruise control, stay in the middle of the road that average feet all the time. So you really need to get these chemicals out of your system that is dopamine or whatever, is when you are doing this new thing that is really rewarding to do, and it is the same feeling when I go home from work these days with this project that's... It is a really good project, people are now... when I have a week to meeting and said Okay let's take a turn around the table what's going on, are you stressed, ... too much time. No no it's fine it's fine. Do need something... No it is fine. And I was like can it really be that we are seven people working on this project and nobody is complaining about it? It's really just fun? Is it really just cool to see what we are doing? [laughter] And I don't want to ask them, because I know that all of them have given a lot of good ideas that is not in the project, but I'm also sure that what we have now in the project as what we are working at, they all feel OK I participated and I chipped in for this or that during the project, and that is really... this is a good feeling to be able to feel that you are able to be in the good process with your colleagues and you have confidence that this is going to work out. But is it what you're doing? Is it part of your education? Take your master's degree or whatever.

Nicola: Yeah, It's my master project. I'm graduating in a month and a half. So it's my final project, I'm taking a master in innovation and entrepreneurship and did the Creative Genius course last semester.

It's very very interesting to work with... like this...

Subject 6: Because I'm trying to get started on a master, a flexible master, I have now a lot of points from the Creative Genius but I have not arranged a set to call for it, but I think it's gonna be something with innovation technology and stuff like that, because this is so related to what I'm doing.

So I really see the effect of being in this type of learning environment, because being a little bit older than you and been working for quite some time, you can get stuck on a path. It's is very rewarding to be able to get some new tools in your box really. So that's how I see it getting more equipped to be in different situations. But I hope that you can benefit from what I experienced the last two hours of talk.

Nicola: Yeah definitely. Thank you very very much.

Subject 6: So yeah good luck with everything.

Nicola: Thank you.

APPENDIX XII: INTERVIEW SUBJECT 7

Nicola: All right. Will you start by telling me a bit about yourself?

Subject 7: Like what?

Nicola: You know. Where you work at, when you did the Creative Genius...

Subject 7: OK. So my name is [REDACTED], and before I started the Creative Genius I'm studying Business Information System Engineering in Germany and my masters. I started the Creative Genius semester because I was really curious about creativity and what's all about. And I thought this was just a great opportunity to actually get hands on creativity and get experience. And during my semester I think one of my main challenges was to find my creative method which I still don't have, so I'm still working on that one I guess. My project was a about... I think in the beginning it was also really fuzzy and I struggled a lot about finding my focus, so focus was also like a little big challenge for me. My project was mainly about kind of his feasibility of rethinking interaction with a digital device and therefore to get more focus I was thinking about the smartphone or the interaction with a smartphone. Yes.

Nicola: You said that you had a hard time finding your creative process.

Subject 7: Yes.

Nicola: Can you put some words on it?

Subject 7: I think it was when Christian and Søren [teachers at the course] told us of their creative methods. It sounds so easy to actually find your Creative methods, like so simple when you finally found it. But it's when... I thoughts in the beginning that it's really easy and I just have to try a few things out. And then I tried a few things out, but it was like still I'm actually not sure; am I more creative or am I not. So it was with these kinds of criteria's. I guess I'm beginning to measure creativity to find out if I'm more likely. If I try something like this I go swimming or I go for a walk and afterwards am I more creative, are there better ideas. Are they coming off more fluently, are they more individual or does it have more kind of a wow effect. And I don't know so far maybe I've found my creative method but I'm just not aware that I found it. Or it's like because I have a feeling I am not sure I wasn't doing or I wasn't in my hometown or home country when I took the semester so this was slightly different school. I had like a lot of experience during the school creativity

semester. And I guess that was because of that I was more likely to be creative but it was also because I wasn't a completely different environment and I think if I would have taken a semester at my hometown my home country I would like start the whole process about finding my creative process may be different. And also experience it different. Because It's this place I've already seen is like walks I already walked or like I don't know environments I've already been in and it was all kind of new when I was in Denmark so I guess it's was also why it's slightly more difficult for me to actually find a process and I also tried now after semester but since I have been like for a month in the same places. So it's like I finished in January my semester in Denmark and I had three months of an internship where I spent three days a week in Munich and spend the rest of the week in my hometown or in the town I'm currently living in so it's also like it's like I don't have this constant living at the moment and so I think it's like finding a process or as far as I understood. Christians and Søren always taught about the process which worked really well. If you have a constant environment. But since I don't have that right now it's like really hard to find a constant process when you are always or everything else seems to change all the time so I'm still trying but I think it will take just a bit more time in my case.

Nicola: Is it correctly understood that because you're... you know you're not... you don't have a base so you'll find that your creativity is not able to evolve maybe?

Subject 7: Maybe that or maybe it's just like I don't know. Maybe it's was when they told us in the beginning maybe I was too much focused to concentrate on a kind of process, maybe it's in my case just more fussy. I think also like I get a little of my creativity from new expressions and new experiences and so maybe it's just I don't have this one process of my kind of process it's just like different experiences and then merge it with what I'm working on.

Nicola: Do you see... You talk a lot about the creative process but do you see – is creativity and creative process the same thing?

Subject 7: No.

Nicola: Can you explain the difference?

Subject 7: For me in the creative process is something really individual. What's it's like. Like a. Process itself is to follow some certain steps to reach a certain goal. Creativity is more like...

Concepts or like. Something abstract and. It's like a world where you can like put a lot into it and it's like when you when you're talking to ten different people about creativity everything... Everybody has a different understanding what creativity actually is. And so I was like a more scientific approach, where people would argue like the Torrance test or like some sort of brain activities. And some would say that this is about creativity. But then you also have like or people which say OK you don't have... You can actually talk about creativity but kindergarten children and they also know what creativity is or at least they can be creative. So it's like I don't have like a good definition for creativity.

Nicola: How would you explain creativity if you met someone who didn't know what it was, how will you how would you explain it?

Subject 7: I would say it's like something unique which belongs to the human species. So it's like humans try to understand and figure it out but still don't. And that helps to actually... when you once... no you actually don't even have to solve something but if you just create something or if you're doing something and you're solving it differently or you're solving it. Others say Oh well I wouldn't consider this in the first place. Then it may be creative.

Nicola: All right. You said you know like... that you are having a hard time defining your creative process. So what do you do now if you have to be creative?

Subject 7: I think I use a lot of the times the ideation process we were taught. Just like yeah I get a lot of ideas, and I'm involved in that. And I also try to do some incubation like just letting it all by the side. I don't know, I read a book or do whatever, and then work later on it again. That's mainly it. But I think it's also like I hadn't yet the scenario where I had to be as creative as in the semester I guess. Because the structure was like nothing compared to where we actually were creative.

Nicola: So yeah are you still using your creativity?

Subject 7: I try to but it's more like... From my personal interest and in my personal private life. So it's like sometimes when I come up. It's like I have a feeling of the semester that I come up more easily with ideas I like, and I like, I just write them down in a notebook so I don't forget them. But it's like not in my normal environment but it's like my semester started, so this year I also take course

with digital entrepreneurship, we're actually working on a product or service, so I can use my creativity.

Nicola: What if you're going to work in a group and want to use creativity. How would you do it then?

Subject 7: To facilitate others I would like to start with the warmups like the short tasks we did and then I'd probably, depending on my purpose if I just want some. So help me figure something out. I would definitely use Sarah Dingly [a creative method] to just to get the knowledge and if I want to actually be creative and work on something, I would like to do some warmups and then also maybe... Depending on the group I would go for the ideation process I guess.

Nicola: Do you think that... You know... Can you explain why you would choose to do the warmups instead of just jumping directly in?

Subject 7: Because I think it's more easy if they feel more comfortable and just get like in the situation and don't feel awkward that they come up more easily with ideas and come up with more ideas such as like a better atmosphere, which leads to better results, and helps them as well as me to actually work because I think where we started this semester was like Oh I think that all the exercises and everything we did helped us a lot that we feel comfortable so we actually come up with ideas because otherwise it would be like oh I don't know or should I say that, It's kind of stupid.

Nicola: So you see these exercises as a method to get people to loosen up a bit?

Subject 7: Yes and it's also like bringing them into the right mindset. I think a lot of people especially when they are older working in a certain environment, they are so used to what they do, and how they do it, and it's like getting them out there and so... Like showing them or getting them into new perspectives and actually like that thing it also can change their perspective and I think it's easier when you start with some games so when you good like with the thinking caps [a method of considering ideas]. Like that now you're wearing a yellow hat on this perspective it's like they come up later on more easily and also different perspectives.

Nicola: All right. Do you know like um do you do these when you do this for yourself. Is it the same mentality when you do the ideation and so on?

Subject 7: I think I like the ideation because it's like I have this kind of process and I know what to do next. And I know that it will lead to something and I just like the structure. So it's like I'm not feeling lost during the process because then also to some of the I know what works. So I think it's mainly that I like the structure and not like, I don't know since I don't have like a structure process for myself.

Nicola: What changes that you see in your creativity Like when you took the course?

Subject 7: Good question. I think a lot changed. Like I think my kind of mindset and my perspective on things changed so it's like when I see something which kind of bothers me but only a bit it's like I'm thinking about OK and what could I do know better. And it's like I'm just a way home or something and see something in the train I think like, that's so stupid, it's not like a good solution at all. But I think, how could you actually change that. It's like playing around with the idea and that's something I would not have done before this semester actually, as well as I'm still curious about creativity. So it's like when I see a magazine now there's an article in the newspaper there's something about creativity. I'm happy to read it. I'm actually buying like I don't know I think I bought last week like a twelve-dollar magazine about creativity I wouldn't have done that before. Like I really like creativity and I also wanted to optimize but it's something more creative. I know I wanted to do something, where at least I can be creative because it's like a lot of fun and I really like to come up and it's a good feeling to actually come up with new ideas and change things. So I think that has changed and I actually thought, that after the semester that I would do more of our exercises during my daily life. But it's like I barely have the time. I actually have this dream that I could merge the teeth brushing with something, but that's not possible. That's actually a pity because I think Christian an Søren are right when they told us. Like when we exercise we. Will be more creative and it's like Yeah I see it, but I don't see how to actually get the exercise into my daily life. Maybe just at some point sometimes but. Like....

Nicola: Life gets in the way of...

Subject 7: I struggle a bit with that. Because it's not like, when you are really tired and you say okay, now 10 minutes of creativity. That's usually not happening. I would say yeah but it's like I'm also curious or I am very curious. So creativity and also innovation. So I think like. A lot of a lot of it. And I also put a focus on that I could still use this semester like it's my last semester. I actually have

classes that I have classes where I can be creative which is like I link to innovation or something where I can use my new skillset.

Nicola: Have you had any days where you got to do the creativity activities?

Subject 7: What do you mean by...

Nicola: You said you wanted to incorporate them every day but you haven't gotten around to it to do some days.?

Subject 7: Yeah. What was more like when I still was in Denmark so like after. The exam I had maybe like. School days where I was also it was not very good. It was only like I was like playing outside and I don't. Like thinking about it but I was not like this semester because I think maybe it's like because of the change or some of that back in my own country or maybe it's just like that I haven't I didn't have time yet to actually sit down and say OK now I'm spending one hour or something I'm just brainstorming on ideation process.

Nicola: A lot of the other people I've interviewed say they don't do... they don't necessarily do the training exercise as presented but they have a way more open mind. So like you said when you're sitting and you know like there's something bothering you they will stop playing with that idea and they consider that you know, like they are training their creativity too. Do you see it this way as well?

Subject 7: To a certain point I would say yes but it's not like I think it's. I'm getting more limited. It's like I just say exercise. It's like I'm coming up with more when I use like the cards we had and it's like I would come up with like ideas from other domains Now it's like a lot of things that I already know or like blending in what I've already seen. But it's like I would say I'd. Do better if I was training maybe not always but in a lot of cases I would say I would come out of my like yeah a few ideas more if I would have trained, but it's like also I would I would agree that it's like a certain way of training but I think it's like probably for me not enough because I know I feel at least that it's like I should train to actually come with maybe a little perfect idea which solves all the world's problems.

Nicola: Yeah. So you see your creativity have decreased since the creativity course because you don't get around to do these training exercises?

Subject 7: No it's more like my creativity increased because of the semester. I just feel like. Increased compared to the states before the semester. But it was, or the peak was during the semester. It's like now it's like still far better or at least kind of there but It's like I'm not as good as the semester but maybe that's like because of the semester because the whole environment and we had these day sessions where we didn't do anything but being creative.

Nicola: Do you think if you started doing the creativity training every day that you would get as creative as you were on the semester, or would you get more and more creative eventually or...

Subject 7: I would say I would get as creative as it was in the semester. I think I would like other people like in the semester so or like... I think what always helped me was to get other perspectives. Therefore, I would need like people who were kind of on the same level to actually work with, and I think that's something not easy to find because it's like getting people into that mindset takes time. And also finding people from completely different domains because I'm getting people for my own domain creative it's nice but it's probably not as helpful as I [Unknown] and that's actually something I don't find that easily. A person that are like I am. So coming back to the question. I think for me I need like two factors. So one is like, finding myself with other people with a comparable mind and skill set which I would like to talk with and to find ideas.

Nicola: All right. So just to recap; So training would get you a lot of the way and get you more creative than you are now but you don't think you could get more creative than you were during the Creative Genius course without other people in the mindset. Is that correctly understood

Subject 7: Yes. I think so yes.

Nicola: If you magically had an hour every day set aside for creativity what would you do during that hour which exercises would you use?

Subject 7: Good question. I don't know. Maybe I would like I'm not sure, like a fixed schedule is like a.. Maybe it's maybe liked a semi structured schedule like. Individual but also group sessions. And maybe it's like you are solving a problem a week or like finding a solution. Yeah. For one thing every week. So you're starting by warming up and then it's like first ideation on your own then it's like ideation in a group. Maybe then it's like prototyping and then it's like groups me again and maybe like we did when we had this one guy from the external company. Like what's not all in one day but

like on five days or like seven days a week. Every day an hour or so kind of that process. So to actually play and it also have this kind of effect it makes you feel good because at the end of the week you actually have something you can say OK. And we came up with this and that's actually a pretty nice feeling.

Nicola: So you find that it's your creativity is more concrete for you when you make a product or you know there's an outcome of it?

Subject 7: I think yes. I think a product is always the easiest way to see what you actually have can come up with but it's like the principle it have the same value. But it's also a principle you can at least draw something so others can easily understand it. I think the goal is like when it's the end of the week, you can say OK I can easily explain what's the purpose and tell which works then. You. Understand for yourself but you also can demonstrate. I think that's pretty nice.

Nicola: You're talking about how it would be nice to have equal minds as a part of this. Do you think you could you know just be when you get a job in your team in the future. Would you be able to make them creative if you think you know you could incorporate this these methods with them as part of your process?

Subject 7: I think it's really depending on the people themselves and I think a tiny bit. Yes. It's like depending on how willing they are to actually participate and you have probably a human team and we're just curious but also kind of believes in creativity because I have sometimes the feeling people just don't believe the creativity and it's really hard to explain to them why it's useful and why it's valuable. And. Depending on that I would say yes but since I would like to work with actually people want to be creative I hope that I'm in a team where maybe people already have some experiences with creativity or at least willing to learn. To just yes figure it out and maybe spend like 15 minutes a day like a short standup just like being creative or using a coffee break to be creative and it doesn't have to be the work time specifically.

Nicola: You said some people don't believe in creativity. Can you explain.

Subject 7: I would say it's like. Like. A lot of projects they only counts when they are valuable and. Valuable means. The end of the day that's there. Has to be money. Tests. And that kind of money is actually like OK for that kind of money if we were to choose a project. But it's not that just like.

Skipping. And. I think in a lot of cases the same people who absolutely thinking about value just based – someone who just are numbers don't stand by creativity at all. I think it's more, like old, white guys like gray positions who thinks that way, but apparently they are there. I think it's like a problem which will get bad in a few years because they are just going. But it's like that of the people who are actually giving a go.

[Interruption]

Nicola: All right so you were talking about how some people can't be creative. Or don't think creativity really exists at all.

Subject 7: I think it's like for them it's like more like a hobby or a fun thing for all like. Young people who... Kind of work life balance and it's like when I a fashion trend I guess for them. You really have to explain why it's actually good for companies. But I think it's also more like really traditional and old-fashioned company like a Bank, it's like really hard to explain why you use creativity.

Nicola: They don't see the value in it.

Subject 7: Yes. And it's like nothing. I mean it's like how do we explain a someone the value of creativity that's not easy. That's like why should we give your team like an hour a week being creative when you can't explain cause it's like they only see the daily rates that it's costing them. So it's like the cost factor for an hour for the whole team is made of like I don't know a few hundred or thousand euros. And so it's like No way.

Nicola: Yeah you said that you are differentiating in age when you talk about creativity. Do you think the younger generations are more creative than the older generations.

Subject 7: I wouldn't say that they are more creative but I think they are more willing to be creative. I think like the younger generation, it's this whole change because now a days we also have this trend that a lot of young people are founding something and founding startups try to be innovative and I mean like innovation is the hype theme right now it's like it gets a lot of attention and I think that really helps because when we talk about innovation it's also about creativity to a certain point and that makes creativity a lot more attractive to younger people nowadays than maybe a few years ago and I think, compared to the generation of my parents I guess on that generation there was creativity, but when you talk about creativity it's like when you want to become a schoolteacher or

maybe like for kindergarten or like an artist what do what wouldn't you like creativity necessarily in. Other domains. It's like no one who would study business would say that creativity is like a huge part which would be very exotic and nowadays it's like Of course like you have this kind of innovation courses. And when we're talking about entrepreneurship. It's always also about innovation but I think that's like a change which occurs during the last couple of years. So I think they have the same capacity because it's like in the human minds. But I think in their case it's more like what they do. In their private life. So once they have children they still have maybe the ability to actually be very creative.

Nicola: Do you think everyone has the capacity to be creative?

Subject 7: Yes.

Nicola: Do you think everyone has the capacity to be equally creative?

Subject 7: No. Maybe. Yes. But it's like. Also I think like I thought about oh I think it's also about education and how you've been raised. Like. If you have like if you're in an environment where people are very supportive about being creative and I think it's more easy when you get older. That's like a good thing. But being in an environment where people taught you that's being creative or like when you say to a child that the pictures skin color couldn't be blue. You always say no, no, no I think that creates limitations and berries in the head. So probably that's and also later on some people won't become necessarily as creative they'll have at least some boundaries to overcome.

Nicola: All right. Back in the beginning you were telling me about these creative magazines. What are they. Can you tell me about them?

Subject 7: Yes like. Usually I like to read a magazine called the new scientists so that's like about new scientific findings. I don't know some random stuff. I can't use but I find it interesting. It's very nice. And then one magazine, I think I have it with me. I don't know if it's like coming out regulatory or like a one-time thing it's like it's called creativity. I can send your photograph later.

Nicola: So it's academic articles about creativity?

Subject 7: Yes. In this case yes. And the other ones are more like scientific articles about anything like physics medicine biochemistry and like anything.

Nicola: Do you think you know reading these articles does it give you the potential to become more creative.

Subject 7: Yes because I think it's like everything I get from other domains or other aspects. It's like I can use for blending into my own domain. It's like getting it maybe some abstract and then blend it in. So it's like I think or like... In the beginning of semester I wasn't sure about like I sometimes don't have a narrow focus but I'm like interesting that a lot of stuff I think actually that interest may be an advantage too like mix it all in the blender and then the get a new idea.

Nicola: I actually have the answer to all my questions now. So is there something you would like to add?

Subject 7: No. I guess.

Nicola: All right. I'm gonna tell you a bit about what I'm writing about. Love to hear your thoughts on it. So it's two parts. The first is that there exists very, very little long-term research on creativity training. I only found two articles about it one from eighty-five and one from '15. And both of those were based purely on the Torrance tests meaning that this is as far as we can figure out the first qualitative study on long term effects of creativity training. So that's one thing that's you know just about data. Then I'm writing a bit about activation of creativity and it's not something we really talked about in the in the course and it's not something that's really discussed in a lot of creativity training. But the concept is that that one thing is creativity training but another thing is when you activate your ability to be creative. And my assumption is that creativity training also activates your creativity meaning that what most test about creativity do is that they give you some training and then right after they test you. And I would say you will be more creative right after because you have activated your creativity. Does this make sense?

Subject 7: Yes, it makes a lot of sense.

Nicola: Yeah. So I'm testing Basically I'm trying to prove that creativity training works independently of creativity activation.

Subject 7: Ok. Independently of creativity activation. Do you like it... Because when you talk about creativity training it's also the activation of the kind of cases where taking the test afterwards. But do we have like something I only activate creativity?

Nicola: According to our research... And that's another thing is that activation of creativity is an extremely fluffy concept. So they're talking about meditation as activation. They are talking about looking at arts or new experiences but I'm also arguing that the picture cards and ideation and these kind of a lot of the methods we learned in the Creative Genius course are also activation of creativity. And I'm trying to see if I can define the concept a bit more and then I'm gonna I'm trying to see if I can differentiate between them. You know whether people say How could you know how people's creativity are whether or not they use activation and how they use it in these kinds of things. Do yeah do you do you recognize the idea that you can do things to activate your creativity.

Subject 7: Yes I think it's like something I also mentioned like I didn't know that that's my activation but I think like new experience in my case it was like something was activated. So it's like kind of proving your point. I would also maybe. I don't know if it's also experience or if it's like a new point, but I think in cases of parents or like. Daycare or kindergarten. So I'm not sure if it's probably true or not. But I think if you're like working with children which seems to see things differently and which don't know what that's about like all the principles and concepts of the world that also might be you know enhance your creativity or activate your creativity or something because you become to see your you're actually. Going with them. Through the whole process.

Nicola: Yeah I would argue especially if people are capable of engaging with the kids

Subject 7: Like in case of women it's like a lot of young founders are actually all like you know. Just like a kind of score which measures. People who found something I can look get up and tell you what it's like. It shows actually as I'd like young mothers. Or like. When it comes to women's the score goes up to when they actually had children or become children. That might also be like linked. So in a way it's definitely linked to innovation and creativity. I think it's like they just see plays differently and I think that's child actually plays a huge part. Yeah. So I can look it up.

Nicola: All right. Do you have anything else you want to add?

Subject 7: Not really.