

# **Aalborg Universitet**

## From Creativity to New Venture Creation

Exploring the potentials of training creativity and business-opportunity spotting Nielsen, Christian; Byrge, Christian; Lund, Morten

Published in:

Australian Centre for Entrepreneurship Research Exchange Conference 2016

Publication date: 2016

Document Version Early version, also known as pre-print

Link to publication from Aalborg University

Citation for published version (APA):

Nielsen, C., Byrge, C., & Lund, M. (2016). From Creativity to New Venture Creation: Exploring the potentials of training creativity and business-opportunity spotting. In P. Davidsson (Ed.), *Australian Centre for Entrepreneurship Research Exchange Conference 2016: Conference Proceedings* Queensland University of Technology.

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
  You may not further distribute the material or use it for any profit-making activity or commercial gain
  You may freely distribute the URL identifying the publication in the public portal -

Take down policy

If you believe that this document breaches copyright please contact us at vbn@aub.aau.dk providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from vbn.aau.dk on: July 05, 2025

From Creativity to New Venture Creation: Exploring the potentials of training creativity and business-opportunity spotting

#### Abstract:

This paper explores the processes of creating new companies with original and useful business models from a conceptual perspective. Based on data from large-scale creativity training programs and business model development studies in Denmark encompassing over 100 companies and 200 entrepreneurs, the key proposition of the paper is that entrepreneurs can enhance their development processes through training their competences in creativity and opportunity spotting. The paper presents the key training methods identified in this study including an embodied creativity training program for daily creativity training, as well as a software-based framework for identifying useful business model configurations. The notion and potential effect of each program as separate tools is discussed, followed by a more in-depth discussion of the interrelationships between creative processes, opportunity spotting and the choice of business model configurations. The implications of the paper are discussed in terms of a research program under establishment as well as a combined teaching module aimed at new venture creation students within higher-education, high schools and primary school levels.

Key words: Creativity training, Opportunity spotting, New venture creation, Original and useful business models, Business model innovation

## 1. Introduction

It is in the interest of societies and nations world-wide to educate and facilitate the innovation capacities of their citizens, in the long run aspiring for growth and thereby wealth accumulation through business, but also better welfare and humanitarian solutions. As we speak, there is a growing realization that education is more than merely acquiring reading, writing, and mathematics skills. The ability to use the knowledge and wisdom we accumulate to create value is becoming evermore evident. It is being recognized that a part of creating successful new products and businesses involves using our knowledge and creativity, and both practitioners and academics are focused on decoding the complexity of creativity processes and utilizing them to a greater extent to create value through new business opportunities.

The proposition being put forth in this paper is that both entrepreneurs and intrapreneurs can achieve improvements to their development processes through systematic training of their competences in creativity and in opportunity spotting relating to business models. Structure of the remainder of the paper is as follows: The next section provides the empirical background for this conceptual paper, namely Research Group for Unlimited Knowledge Application on the one hand, and the International Center for Innovation on the other. Section three introduces the theoretical basis of embodied creativity training as well as business models and business opportunities. The fourth section discusses the implications of connecting these fields of study and how they might be embedded into a research program under establishment as well as a combined teaching module aimed at new venture creation students within higher education, high schools and primary school levels. The final section offers implications and conclusions.

# 2. Empirical background

In the study of the fields of creativity and business models, we have been privileged to interact with more than 100 companies and over 200 dedicated individuals over the last 7 years in a number of structured cases using a participatory action research design. The goal of this research has been to help individuals and companies in developing novel solutions to existing problems, whether the case has been developing radically new, and creative, ideas or more incremental progressions to existing solutions.

# **Research Group for Unlimited Knowledge Application**

The creativity data forming the basis of this paper is derived primarily from experimental and action research projects in private and public organisations and educational institutions conducted in relation to the Research Group for Unlimited Knowledge Application. The research focused on the situational, short-term as well as long-term enhancement of creativity for individuals, teams and organisations in any discipline.

Some of the first internationally recognized creativity training programs were developed during the 1960's. Most of these were short and simple including 10 minutes training programs that only gave a few hints of how to think creative (Ridley & Birney 1967; Miller, Russ, Gibson & Hall, 1970). Since then creativity training has become longer and more advanced including training programs lasting several days or weeks (Byrge & Hansen, 2013; Baer, 1988; Davis & Bull, 1978; Burstiner, 1973; Cliatt, Shaw & Sherwood, 1980; Byrge & Tang, 2015) including elements such as: processes (Parnes, 1992; De Bono, 1985), techniques (Wycoff, 1991),

strategies (Davis & Roweton, 1968; Conningham & MacGregor, 2008) and cognitive stimulation (Gordon, 1961; De Bono, 1992). Today there are full bachelor programs where creativity is a central component like Creativity & Business Innovation at Vilnius College, full elective semesters like Creative Genius at Aalborg University as well as full master programs like the Creative Studies at Buffalo State University.

Creativity training has been shown to have an important effect on the development of creativity for individuals (Rose & Lin, 1984; Scott, Leritz, & Mumford, 2004; Torrance, 1972). In fact, the discussion is no longer whether such training has an important effect for enhancing human creativity. Rather the current discussion is concerned with how much effect as well as the relationship between the type of training and the type of effect.

There are only few disciplinary perspectives on the enhancement of human creativity. These include heredity, family and upbringing (Simonton 1994), knowledge accumulation and environment (Byrge & Hansen, 2014), domain related deliberate practice (Hayes 1989; Macnamara, Hambrick & Oswald (2014); Ericsson, Krampe and Tesch-Römer 1993) and creativity training (Scott, Leritz, & Mumford, 2004). Heredity, family and upbringing are almost contingent factors, which are difficult to change when humans reach adulthood. Environment is dynamic and can readily change depending on external non-controllable factors. Knowledge and domain related deliberate practice have the negative side of causing a less flexible mind (Frensch, & Sternberg, 1989). Thereby creativity training seems to offer itself as an important approach for the enhancement of creativity.

Hansen & Byrge (2007) invented a new method for planning and facilitating a creative process for highly heterogeneous groups. The method is called The Creative Platform. The Creative Platform was originally designed to facilitate a creative process involving both industry and university actors in a 48-hour camp setting. These industry–educational creative processes using this method in 24-48 hour camp settings quickly became popular across the educational system in Denmark and a number of practitioner books (Byrge & Hansen, 2007; Byrge & Hansen, 2008; Ullersted, Bager, Blom, Borg Larsen, Byrge, 2010) were published to support this dissemination. Later, The Creative Platform became popular in the broader industry and in particular in educational settings to facilitate creative process of networks, teams, groupwork, classes and departments.

Studies on the application of The Creative Platform in a creativity network consisting of 18 cross-industry organisations found that participants experienced a higher level of concentration, motivation, confidence and knowledge application than in other creative work (Byrge 2011). Participants identify a number of variables important for this effect including a high diversity in the team, a rapid production of ideas, a strong focus on ideas rather than persons, use of external memory, absence of technical devices, anonymity, intensive creativity exercises, and a consistent acceptance of all ideas and mistakes (Byrge, 2011).

The Creative Platform was criticized for only having a short-term effect, and a call for a more long-term development of creative individuals was growing among practitioners that had been in touch with the The Creative Platform. In collaboration with public organisations and private companies Byrge (2016, working book) developed an Embodied Creativity Training Program to facilitate a long-term development of creativity. The Embodied Creativity Training Program is

applied as morning training, training in the beginning of meetings, individual training and as monthly training depending on the organizational/educational setup.

Studies on the application of the Embodied Creativity Training Program using experimental preand post-tests shows that creative production is significantly increased both in terms of fluency, flexibility, originality and resistance to premature closure (Byrge & Hansen, 2013; Byrge & Tang, 2015). It also shows a significant increase in creative self-efficacy (Byrge & Tang, 2015). Organizational studies on the application of the Embodied Creativity Training Program shows an effect in relation to a more open mind towards organizational change, an increased willingness and ability to elaborate on ideas from colleagues, a strengthened feeling of community and increase in knowledge sharing as well as an increased level of energy at the workplace (Byrge, Osmundsen, Tang, 2013). The study also showed a strong grouping among employees into "hot" or "not" – employees seem to either love the training or not wanting to train at all.

#### **Business Models**

The business model research data forming the basis of this paper is derived primarily from a large-scale research and business development project called the International Center for Innovation (ICI), and secondly on and a series of related spinoff projects. The research in this center focused on the process of designing, testing and implementing new business opportunities and business models. The researchers interacted with companies by testing applied methods that might enhance the success rate for managers and their businesses.

The ICI project started in 2008 and was initiated as a business development initiative under the Northern Denmark Region funded by European Structural Funds. The region had an ambition to give the local businesses new knowledge and tools to strengthen their growth potential and to cope better with the rising global competition. The project took on the challenge of many companies in the region experiencing that their present business models could not maintain sufficient competitiveness, profitability and withstand the pressures of global competitors' rapid copying of their products and solutions or the development of alternative new products. This despite the fact that many of the companies had been perfecting their ability to extensively innovate products many years and generally had a high innovation rate.

As a result of 6 years of analysis on this data, the Business Model Design Center (BMDC) was established to continue the work enabling cutting-edge research by establishing a platform for multidisciplinary contributions that break away from traditional academic silos. The contributions of the rigorous scholarly research have led to publications in leading scholarly journals. Furthermore, the applied research and the sound strategic advice has had a significant impact on the practices of the companies with which BMDC continues to collaborate. This is evident from the ability to attract organizations and funding, as new industrial sectors and academic fields continue to start recognizing the importance of business model design for the future competitiveness of companies in an evermore complex global world.

The business model research conducted in ICI was based on interaction between companies and researchers in order to create real innovations, with real impacts on customers. As researchers, we experienced that companies did not want us to simply disseminate state—of-the-art business model theory. Instead, they wanted the researchers to interact and to demonstrate how the theories and models could be used in real life. Therefore great efforts were made to convert the

theory of creativity and business models to real-life situations. The ICI project was a unique action-research project that provided valuable empirical data and gave the participating companies new knowledge related to the understanding of business models, as well as how to design and test them.

# 3. Theoretical background

### **The Creative Platform**

The Creative Platform (Byrge & Hansen 2014) is a process-oriented method for teams. It is primarily a reflective training program because it gives the trainee an understanding of how and when to use the method to plan and facilitate creative processes in teams. As such it is part of building a strong method toolbox for creativity. It creates a short term breakaway from everyday thinking, behavior and communication in teams by training and facilitating according to four fundamental principles of creativity (Byrge & Hansen 2014). These four principles are as follows.

- 1) **No-experienced Judgment** is to give the participants an experience that judgment is not taking place in the process. Any situation during the process where judgment is taking place will create an experience of judgment. Therefore the key is to replace all situations of judgment with non-judgmental situations. Hereby it will become possible to make 30 minutes or 40 hours processes where the feeling of judgment is slowly replaced with no-experienced judgment. There should be no judgment of the participants, of the process, of the ideas produced or any other part of the process. No-experienced Judgment is a principle that ensures that the participants dare to think and share original ideas in the process.
- 2) **Task Focus** is to focus on the task rather than focusing on yourself or persons around. Person focus is standard in most teams because it is how we have been taught throughout educational systems. The most common person focus is to socialize. Socializing is a high demanding cognitive activity and will rarely leave room for creative incubation activity. Socializing involves a lot of judgment of the weather, the boss, a political party, a friend or other things, which eventually will lead to a stronger feeling of judgment in the process. It is therefore important to minimize socializing before and during the creative process. The same goes for personal introduction. Personal introductions often include a positioning of the participants into hierarchy, status, expertise and experience. The effect of a personal introduction is protectionism where the participants will do their best to live up to the position they branded themselves with in the personal introduction. This makes it difficult to share and accept non-logical ideas or non-rational ideas, which are typically the ideas that lead to other original ideas. It does not matter who is an expert in what. What really matters is that all the knowledge available is applied into ideas for solving the problem in the process. Task Focus is a principle that ensures that the participants can forget the rest of the world and the social systems they are part of for the duration of the creative process.
- 3) **Parallel Thinking** is to be engaged in one part of the process at a time. It is also often referred to as "one task one deadline" because the participants should never think about future or previous parts of the process. It is supposed to stop any kind of multitasking. The key is to make all participants focused on the same part of the process at the same time. The feeling of common focus will increase sensitivity in thinking on that particular

- part and it will insure good conditions for knowledge to easily flow from one person to another because everybody is thinking about the same thing at the same time. Parallel Thinking is a principle that ensures that the participants are able to put all their cognitive attention capacity onto the part of the process at hand.
- 4) Horizontal Thinking is to apply knowledge not directly related to the problem. Traditional education teaches and trains us to think vertical to apply knowledge directly related to the problem. Vertical thinking is for example to use marketing books or marketing experience to solve marketing problems. This will lead to classic standard solutions to all kinds of problems. Horizontal thinking is for example to use your knowledge about how magnetism can "make a magnet piece stick to a magnet plate" to find a new way of "holding the two sides of the shoe together" in order to replace the traditional laces and Velcro. It does not take a user-centric approach, where focus is typically on satisfying existing user/customer needs. Rather it takes an originality approach, where focus is on the production of psychological or historical original and useful ideas by setting best conditions for an unlimited application of knowledge. Horizontal Thinking is a principle that ensures that the participants are able to combine all their knowledge in news ways regardless of its relation to the problem in the process.

The Creative Platform follows a six-phase model for the process (Byrge & Hansen 2015). These six phases are designed to ensure that the participants in the process easily can follow the four fundamental principles for creativity. The six phases are as follows.

Phase 1) Preparation involves the following activities:

- a) Setting a team from the perspective of making the biggest mental library possible
- b) Organize the physical room a in a way that supports the four fundamental principles.
- c) Plan the process in detail and organize the material needed for the process

Phase 2) Red Carpet involves the following activities:

a. You take responsibility to ensure the participants are not mentally stuck in the past and future. The key is to create a series of engaging creativity training exercises (or alternatively energizers). Typically the red carpet lasts for 20-40 minutes and involves 4-6 exercises.

Phase 3) Problem Presentation involves the following activities:

- a. You take responsibility to ensure that the problem is presented shortly and with only the most necessary background information.
- b. The problem should be presented right after the red carpet. If presented before the red carpet the participants will have difficulties focusing on this presentation because they are mentally stuck in the past or the future.

Phase 4) Idea Generation & Idea Development involves the following activities:

- a) Idea generation starts with a top of the head individual production of ideas.
- b) Ideas are quickly presented in smaller teams of 4-5 participants to ensure noexperienced judgment.
- c) Selection is an individual process or done in teams by anonymous voting. The idea development will determine whether the surprising and original ideas are also applicable.

- Phase 5) Idea development is achieved by applying vertical and horizontal knowledge to the selected ideas in order to find out if and how they may be applicable. Professional (expert) Input involves the following activities:
  - a) The purpose of professional input is to give the "surprising and original" ideas a second chance
  - b) The participation of these new experts into the process requires an effort to make sure that they are not just judging whether they believe the ideas are useful/applicable or not. Blue Carpet involves the following activities:
  - a) The purpose of the blue carpet is to take the participants down from The Creative Platform and back to their everyday life of judgment, multitasking, person focus and vertical thinking.
  - b) The second step is to evaluate and discuss the creative process in order to make the planning, facilitation and performance better in the next creative process on The Creative Platform.

# **Embodied Creativity Training Program**

The Embodied Creativity Training Program (Byrge, 2016, working book) is an exercise-oriented method for personal development. It is primarily made up of embodied training because it makes the trainee become more creative on command in all sorts of work settings including individual work, teamwork and broader organizational work. As such it is part of building and enhancing key skills for creativity. Embodied creativity training creates better situational conditions for creative performance on specific creativity variables. The notion is that by practicing being creative the trainee becomes more creative. This is the same notion that goes for embodied training for becoming better at soccer, dancing, singing, math, IQ-problems and most other skills. The creativity variables being trained are as follows:

- Creativity variable 1) **Flexibility** is to develop a variety of ideas that are diverse form each other (not similar ideas). It involves being able to change perception on command and to continuously change perception.
- Creativity variable 2) **Parallel Thinking** is to focus on what happens right now. It involves being able to work in accordance to one task one deadline.
- Creativity variable 3) **Fluency** is to keep a thought process going. It involves being able to produce a high number of ideas in a short time.
- Creativity variable 4) **Horizontal Thinking** is to be able to combine existing non-related knowledge in new ways. It involves being able to identify and apply the principles behind products and situations.
- Creativity variable 5) **Creative elaboration** is to further develop existing ideas this being your own ideas or the ideas produced by others. It involves being able to accept any idea and make creative contribution to this idea.
- Creativity variable 6) **Persuasion** is to convince others that your idea is a good idea in order to make them comply to the idea or to make them make further development on your idea. It involves being able to respond creatively to critical feedback on your ideas.
- Creativity variable 7) **Originality** is to produce unique and infrequent ideas. It involves being able to completely rethink how to approach a situation or a problem.
- Creativity variable 8) **No-experienced Judgment** is to think, share and elaborate on ideas without feeling judged by you or by others. It involves being able to accept mistakes made by you or by others.

- Creativity variable 9) **Visualizing future scenarios** is to fantasize about possible situations that have never happened and may never take plans. It involves being able to imagine improbable situations.
- Creativity variable 10) Challenge fundamental established theories and practices is to make a serious attempt to question beliefs by coming up with alternative perceptions or ideas.
- Creativity variable 11) **Identifying creative output** is to have an intuition to distinguish between non-original and original ideas and to be able to identify when fluency, flexibility and creative elaboration takes place in a creative work.

The Embodied Creativity Training Program has several formats including a board game, a classroom facilitation setup, a digital online game, a team self-instruction program, as a digital e-mail/text and as direct supervision and instruction. No matter the format chosen it should support the creation of an optimal situational condition for creative performance in each exercise. This means that the trainee should have the best conditions for being creative during each training exercise. The proposition of embodied creativity training is that the trainee will become more creative on command the more he/she trains. For example the trainee might train for 5 minutes a day, 1 hour a week, 6 hours a month or take a boot camp training creativity 40 hours straight. The hypothesis is that the more training the more the "creative variable" will turn into an embodied skill that becomes part of the automatic response pattern whenever creative ideas are needed.

#### **Business model**

Defining what is a business model is an ongoing discussion. Porter points out that the term itself is inconclusive, "The definition of a business model is murky at best. Most often, it seems to refer to a loose conception of how a company does business and generates revenue. Yet simply having a business model is an exceedingly low bar to set for building a company" (Porter 2001, p. 73). Likewise, discussing the foundations of the term, Chesbrough & Rosenbloom (2002, 530) argue that the origins of the business model concept can be traced back to Chandler's seminal book Strategy and Structure from 1962. Strategy, Chandler states, "can be defined as the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals" (Chandler 1962, 13). Further developments of the concept travel through Ansoff's (1965) thoughts on corporate strategy to Andrews' (1980) definitions of corporate and business strategy, which, according to Chesbrough & Rosenbloom (2002), can be seen as a predecessor of and can be equal to that of a business model definition.

The interest in business models in the wake of the dot.com boom led to the development of numerous business model definitions (for a thorough review of these, cf. Jensen 2014). While business models were often associated with companies that were not making money, the definitions of what a business model was, did not lack a revenue parameter. For example, Bell and Solomon (2002, xi) included a profit angle when they stated that a business model is:

"[A] simplified representation of the network of causes and effects that determine the extent to which the entity creates value and earns profits."

In reality, the field was characterized by a very heterogeneous set of ideas about what business models were (the definitions), and what it meant to describe and analyze business models (the frameworks). Moreover, practitioners had very little guidance in their work with innovating the business models of companies. A breakthrough came in around 2004/2005 when Osterwalder introduced the business model as a conceptual tool (Osterwalder, 2004; Osterwalder and Pigneur, 2005). His framework, or canvas as it is called today (Osterwalder and Pigneur, 2010), contains a set of elements (building blocks), describes their relationships, and allows for the expression of the business logic of a specific firm. It leads to a structured description of the value a company offers to one or several segments of customers. Moreover, Osterwalder and Pigneur's (2010) framework also describes how the architecture of the firm and its network of partners serves as a platform for creating, and delivering this value and relationship capital, in turn leading to the generation of a sustainable revenue stream.

This assumption corresponds with the previous remarks about business models being more complex than a matter of revenue model or profit margin scheme. Business models are concerned very much with the configuration of the whole activity system surrounding the value proposition aimed at the firm's customer segment(s). Likewise, George and Bock (2011) define business models as the design of organizational structures to enact a commercial opportunity.

## **Business opportunity**

A business opportunity, as a foundation for a company, can be defined in different manners. For example, franchises are a form of business opportunity that typically comes with a proven business model design from the firm offering the franchise to a potential franchisee. Other forms of business opportunities have smaller evidence of potential success than that of the franchise. In the United States the Federal Trade Commission (FTC) defines a *Business opportunity* as a commercial arrangement (Code of Federal Regulations, § 437.1 - https://www.law.cornell.edu/cfr/text/16/437.1) in which:

- 1. A seller solicits a prospective purchaser to enter into a new business; and
- 2. The prospective purchaser makes a required payment; and
- 3. The seller, expressly or by implication, orally or in writing, represents that the seller or one or more designated persons will:
  - a. Provide locations for the use or operation of equipment, displays, vending machines, or similar devices, owned, leased, controlled, or paid for by the purchaser; or
  - b. Provide outlets, accounts, or customers, including, but not limited to, Internet outlets, accounts, or customers, for the purchaser's goods or services; or
  - c. Buy back any or all of the goods or services that the purchaser makes, produces, fabricates, grows, breeds, modifies, or provides, including but not limited to providing payment for such services as, for example, stuffing envelopes from the purchaser's home.

While these so-called "pre-made" business opportunities can be lucrative, the ability to innovate and create radically new business model configurations is also a possibility. A prospective entrepreneur can thereby either create radically new business model configurations around existing business opportunities, which might produce much more flexible solutions outside of the realm of the legal notion of business opportunities. On the other hand, an entrepreneur may

identify a market segment in need of a distinct value proposition completely outside of the realm of existing business opportunities and in such a situation the degree of variation and room for creative solutions is much bigger. At the same time, however, uncertainty will also be expected to increase dramatically and the demands of the entrepreneur to be able to guide him/herself through the startup and financing process are probably also much greater.

### **Generating new business opportunities**

Generating a business opportunity is not the same as actually starting a business. The entrepreneur, or team or entrepreneurs, who actually launch a business, need to complete a number of additional steps from that of idea generation and opportunity spotting. Entrepreneurs without experience often struggle with these steps. This may be due to the fact that they have no prior understanding of the many different business model configurations there are to choose from and how to go about conducting this analysis and choice. In the business model configuration module of this proposed education, students are trained to use the business model suite software that, from 249 value drivers, has identified 62 presently applied business model configurations. This software-based framework can be used for identifying useful business model configurations and supporting the analytical processes of students.

An example of relatively new business opportunity is the APP industry that supports the Apple App-store environment. As in the licensing business opportunity, the business owner can be creative and invent products, but utilize a name brand, icon, or trademark of a widely recognized business. However, the created product is not at all influenced by Apple, but by market forces and creative abilities.

### **Perfecting existing business opportunities**

Perfecting or refining a business opportunity is also a way of creating a new business model around a business opportunity, and most of these business opportunities come with helpful information and other items that can help launch the business successfully. An example of a Distributor perfecting existing business opportunities is in the case of the Danish Distributor of an American company Weber-Stephen a manufacturer of charcoal, gas and electric outdoor grills. After creating a sales success in their marked they added new accessories and created a fan culture around their brand. In this example we see that business model configurations actually can play an important inspirational role for the sake of identifying new ways of creating value around an existing business opportunity.

### 4. Discussion

In the sections above, we introduced the attributes and effects of each "program", namely The Creative Platform and Embodied Creativity Training on the one hand and business opportunity and business model configuration spotting on the other, as separate tools. This leads us to discussing the interrelationships between creative processes, creative skills, opportunity spotting and the choice of business model configurations. From the outset of the theoretical sections above we here propose a conceptual process model for the creation of original and useful business models through the basic concepts of creative processes, creative skills and business opportunity spotting. The model, involves eight phases:

- 1. Preparation
- 2. Establishing a creative mindset
- 3. Understanding problem or situation
- 4. Idea generation
- 5. Professional input & idea development
- 6. Business model opportunity spotting
- 7. Value proposition design
- 8. Business model configuration

In these eight phases it is possible to combine the traits of creativity training and opportunity spotting with business model configuration in a process where they create a gradual overlap between one another. In the beginning of the process the focus is completely on creativity training and creative process (YELLOW). Then, opportunity spotting (GREEN) is gradually introduced and finally the third phase of business model design, testing and configuration (PINK) is introduced. The first two phases gradually decline in focus, but do not disappear altogether.

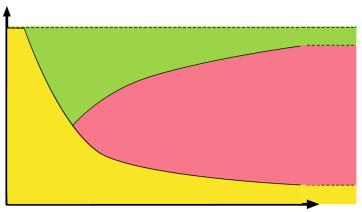


Figure 1: Process focus over time

This conceptual process model for the creation of original and useful business models through the basic concepts of creative processes and business opportunity spotting is illustrated in figure 2 below. In the figure we have depicted the necessary skills for each phase.

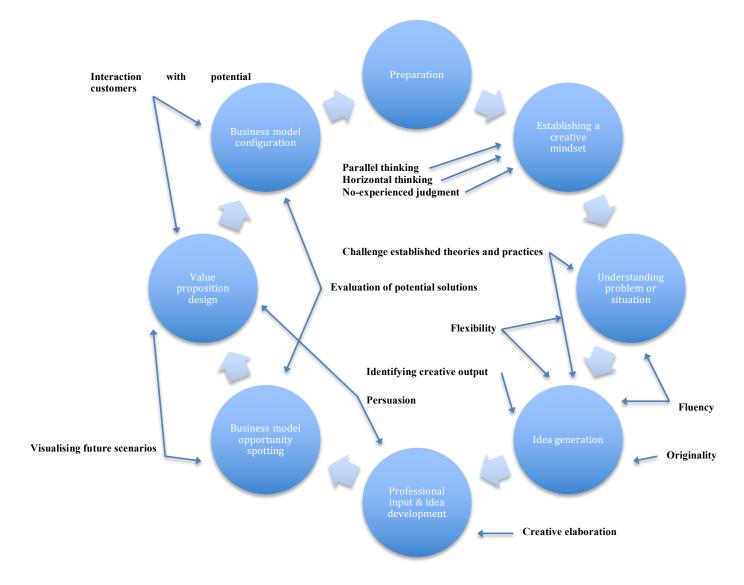


Figure 2: Necessary skills related to the eight phases

1. A future teaching module may be designed around the three focuses of A. creativity training and creative process, B. opportunity spotting and C. business model design, testing and configuration. This teaching module may follow the 8-phase model of 1. preparation, 2. establishing a creative mindset, 3. understanding problem or situation, 4. idea generation, 5. professional input & idea development, 6. business model opportunity spotting, 7. value proposition design, 8. business model configuration. Finally the teaching module may provide embodied training in parallel thinking, horizontal thinking, no-experienced judgment, challenge established theories and practices, flexibility, fluency, originality, identifying creative output, persuasion, creative elaboration, visualizing future scenarios, interaction with potential customers.

# 5. Implications and conclusions

This paper documents two individual training programs from two different disciplines: creativity and business modeling. It combines these programs into a new program that has a stronger focus on the interrelation and will result in more original and useful business models. The findings in this paper are relevant for educational institutions who want to strengthen their current or future education in entrepreneurship, intrapreneurship or innovation management. They are also relevant for firms with an interest in creating original and useful business models.

It is possible to conceptualize this contribution according to three dimensions:

- 1. Methods; this dimension includes tools, techniques and process structures aimed facilitating and evaluating original thinking both in the form of creative methods and business model method.
- 2. Personal development; this dimension relates to guiding the trainees on how to embody the creative and business model skills as well as teaching them how to structure training programs for themselves. This would lead to the creation of a creative genius mindset and a business model configuration mindset.
- 3. Impact; this final dimension concerns the ability to persuade other stakeholders to buy in on a business development process and in the end also to buy into the chosen business model configuration and the team that might be created around such a business opportunity.

A final point of notice is that on a university level we see this educational program as a post-graduate program. This would ensure that the participants in, hopefully, cross-disciplinary start-up teams, turn up at the table with highly specific knowledge gained in bachelor studies from which to contribute with. We envisage a teamwork model that is designed so that the originality of ideas does not die in compromises and furthermore so that start-up teamwork becomes more of a collaborative working process.

## References

Altshuller, G., Shulyak, L., Rodman, S. & Fedoseev, U. (1997). 40 principles: TRIZ keys to innovation, Technical Innovation Center.

Andrews, K.R. 1980. The Concept of Corporate Strategy. Homewood: Richard D. Irwin.

Ansoff, I. 1965. Corporate Strategy. McGraw-Hill.

Baer, J. M. (1988). Long-term effects of creativity training with middle school students, Journal of Early Adolescence, 8, 2, 183-193.

Bell, T. & I. Solomon. 2002. Cases in Strategic-Systems Auditing. KPMG LLP.

Burstiner, I. (1973). Creativity training: Management tool for high school department chairmen, The Journal of Experimental Education, 41, 4, 17-19.

Byrge, C. (2011). Conceptualisation of Creativity Practices through Action Research: The case of The Creative Platform at Aalborg University, Aalborg University, 2011. 331 p.

Byrge, C. (2016). Embodied Creativity Training: For long term enhancement of creative

abilities.

Byrge, C. & Hansen, S. (2007). Uhæmmet anvendelse af viden gennem horisontal tænkning på Den Kreative Platform, IDEA-Nord, 2007.

Byrge, C. & Hansen, S. (2008). Den kreative platform: horisontal tænkning, IDEA-Nord, 2008. 68 p.

Byrge, C. & Hansen, S. (2013). Course in New Thinking in higher education: Enhancing creativity through the mean of training, theory and workshop, Problems in Education in the 21<sup>st</sup> Century, 51.

Byrge, C. & Hansen, S. (2014). Enhancing creativity for individuals, groups and organizations: Creativity as the Unlimited Application of Knowledge, Frydenlund Academic, 2014. 199 p.

Byrge, C. & Hansen, S. (2015). The Creative Platform: A handbook in Creative Processes for Education and Worklife, Frydenlund Academic, 2015. 105 p.

Byrge, C. & Tang, C. (2015. Embodied creativity training: Effects on creative self-efficacy and creative production, Thinking Skills and Creativity, 6, 51–61.

Byrge, C., Osmundsen, R. F. & Tang, C. (2013). Developing a Creative and Innovative Organisational Culture: Experiences from Continuous Embodied Creativity Training, Cicalics Proceedings, Globelics Reasearch Series, 2013.

Chandler, A.D., Jr. 1962. Strategy and Structure: Chapters in the History of the Industrial Enterprise. Cambridge: The M.I.T. Press.

Chesbrough, H. & R.S. Rosenbloom. 2002. The Role of the Business Model in Capturing Value from Innovation: Evidence from Xerox Corporation's Spin-Off Companies, *Industrial and Corporate Change*, Vol. 11, No. 3, pp. 529-555.

Cliatt, M. J. P., Shaw, J. M. & Sherwood, J. M. (1980). Effects of training on the divergent-thinking abilities of kindergarten children, Child Development, 51, 1061-1064.

Cunningham, J. B. & MacGregor, J. N. (2008). Training insightful problem solving: Effects of realistic and puzzle-like contexts, Creativity Research Journal, 20, 3, 291-296.

Davis, G. A. & Bull, K. S. (1978). Strengthening affective components of creativity in a college course, Journal of Educational Psychology, 70, 5, 833-836.

Davis, G. A. & Roweton, W. E. (1968). Using idea checklists with college students: overcoming resistance, Journal of Psychology, 70, 221-226.

De Bono, E. (1985). Six Thinking Hats: An Essential Approach to Business Management, Little, Brown, & Company.

De Bono, E. (1992). Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas, Harper Business.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance, Psychological Review, 100, 363–406.

Frensch, P. A., & Sternberg, R. J. (1989). Expertise and intelligent thinking: When is it worse to know better? In R. J. Sternberg (Ed.), Advances in the psychology of human intelligence (Vol. 5, pp. 157–188). Hillsdale, NJ: Erlbaum

George, G. and Bock AJ. 2011. The business model in practice and its implications for entrepreneurship research. Entrepreneurship Theory and Practice, *Long Range Planning*, 35(1): 83-111)

Gordon, W. J. (1961). Synectics, Harper.

Hayes, J. R. (1989). Cognitive processes in creativity. In J. A. Glover, R. R. Ronning, & C. R. Reynolds (Eds.), Handbook of creativity, pp. 135-145, Plenum

Jensen, A.B. 2014, 'Do we need one business model definition?', Journal of Business Models, Vol. 1, No. 1, pp. 61-84.

Macnamara, B. N., Hambrick, D. Z., & Oswald, F. L. (2014). Deliberate Practice and Performance in Music, Games, Sports, Education, and Professions: A Meta-Analysis, Psychological Science 2014, Vol. 25(8) 1608–1618.

Miller, B. J., Russ, D., Gibson, C. & Hall, A. E. (1970). Effects of free association training, retraining, and information on creativity, Journal of Experimental Psychology, 84, 2, 226-229.

Osborn, A. F. (1963). Applied imagination, Scribner's.

Osterwalder, A. & Pigneur, Y. 2005. Clarifying business models: Origins, present, and future of the concept. Communications of AIS, 2005, 1-25.

Osterwalder, A. & Pigneur, Y. 2010. Business model generation, New Jersey, John Wiley & Sons, Inc.

Osterwalder, A. 2004. The business model ontology: A proposition in a design science approach. Switzerland Doctoral, University de Lausanne.

Parnes, S. J. (1992). A Source Book for Creative Problem Solving, Creative Behavior Foundation.

Porter, M.E. 2001, Strategy and the Internet, *Harvard Business Review*, March, pp. 1-11.

Ridley, D. R. & Birney, R. C. (1967). Effects of training procedures on creativity test scores, Journal of Educational Psychology, 58, 3, 158-164.

Rose, L. H. & Lin, H.-T. (1984). A meta-analysis of long-term creativity training programs, Journal of Creative Behavior, 18, 11–22.

Scott, G., Leritz, L. E., & Mumford, M. (2004). The effectiveness of creative training: A quantitative review, Creativity Research Journal, 16, 361-388.

Simonton, D. K. (1994). Greatness: Who makes history and why, The Guilford Press.

Torrance, E. P. (1972). Can we teach children to think creatively?, Journal of Creative Behavior, 6, 114-143.

Ullersted, M., Bager, T., Blom, U. & Borg T. L. (2010). Camp Guide: Genvej til unikke ideér, IDEA-Nord, 2010. 56 p.

Wycoff, J. (1991). Mind Mapping, Berkley Publishing Group.