12-2017

Exploring Strategies for Teaching Creatively Online

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Exploring Strategies for Teaching Creatively Online

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An Abstract of a Project
in
Creative Studies

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

December 2017

Buffalo State
State University of New York
Department of Creative Studies

ABSTRACT OF PROJECT

Exploring Strategies for Teaching Creatively Online

The way we learn and teach is changing. There is more emphasis on collaboration and personalization of the learning. Teaching online is becoming common. For my Master's project I have developed a product that will help designing and delivering teaching programs creatively through the use of online learning opportunities. The product discusses the opportunities and challenges of a creative climate when teaching online and provides strategies to develop creativity during the online learning process. It is developed with the use of the Torrance Incubation Model of Teaching and Learning (TIM) and Ekvall's ten dimensions of a creative climate. This paper describes the process of developing the product. Relevant literature and resources about creative climate, TIM and teaching in an online environment are identified. A first version of the product is received as comprehensive and useful. It needs further development to make the product appropriate for a broader audience. The process of developing the product has shown the importance of experimenting and of keeping your goal in mind and acting deliberately towards your goal.

Keywords: online teaching, online learning, creative climate, Torrance Incubation Model

Signature

December 10, 2017

Date

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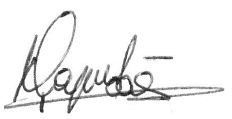
Dates of approval:

December 13, 2017



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December 13, 2017

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Acknowledgements

I want to thank the faculty of the International Center for Studies in Creativity for teaching and guiding me in my journey towards this Master of Science degree. Thanks to my fellow students of the first cohort in Europe, the Euriginals, for their inspiration and collaboration.

Special thanks to my academic advisor, Gerard Puccio, in showing me how to develop a vivid image of the future. A vision that will help me to achieve my goals in life and more specific in the field of creativity.

Special thanks also to my advisor of my Master's project, Nur Cayirdag. Her wisdom and valuable feedback kept me on track in developing a useful product.

I am grateful that Branko Broekman's vision of establishing a cohort in Europe gave me the opportunity to pursue this program in the Netherlands. Branko taught me the essence of creative thinking and showed me the impact of acting creatively.
Branko, thank you so much for your lessons and for your guidance in becoming a creative leader.

I'd also like to thank Nicolette Wever, my buddy during the whole program and my friend for life. Thank you, Nicolette, for being there for me in difficult times and for all the joy on this and other (learning) journeys.

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SECTION ONE: BACKGROUND TO THE PROJECT

Purpose and Description of the Project

In the present age, the use of the Internet and digital technology has permeated into our daily lives. This use is not limited to the working environment anymore, but has become an influential technology in our personal and professional environment. Digital technology has been an enabler for global collaboration without travelling and for working at different places at chosen times. It has given us the freedom to stay connected while moving around the globe. The impact of the Internet and digital technology for businesses on delivering their products and services is enormous. For the sector I am working in, this is no exception. I am a facilitator of change for businesses, government and non-profit organizations. Furthermore, I train adults to enhance their creative skills. The training sessions are mostly delivered in a face-to-face manner, supported by digital tools in an asynchronous way, like email and cloud services for document storage (Explanation of concepts in Appendix A). I have to travel to my clients and often clients have to travel to a specific training location. To reach the people who want to learn more about creativity, training needs to be accessible. With all the offering of online learning, some people do not want to travel anymore. Others are too busy to leave home or the office for several training days. Online learning offers more flexibility in choosing the time you want to study. This flexibility is reinforced by the possibility of recording sessions and storing data. Furthermore, “a significant amount of research demonstrates that educational technology can usefully support the engagement of online learners” (Kahn, Everington, Kelm, Reid, and Watkins, 2017,p. 204). The time has come to shift part of my services to an online learning environment.

To prepare myself for this shift, I started reading literature about online learning and I

explored how to engage learners in a virtual environment. On the one hand this made me aware of the amount of work that had to be done and on the other hand it helped me to define the change needed. And slowly, the idea for this Master's project germinated.

Following the principles of my study, a good way to achieve a result is to design, practice, evaluate and learn. This means my Master's project is phase one of a bigger project leading to the implementation of several training programs delivered in a mix of online asynchronous, online synchronous and face-to-face learning.

For my Master's project I want to develop a product that will help me and my colleagues to design and deliver creativity training programs with various durations and on diverse topics. The product is meant for training programs that will be delivered through the use of online learning opportunities. It will discuss the chances and challenges of a creative climate when teaching online and it will give strategies to develop creativity during the online learning process. The strategies will provide creativity trainers and teachers insights and ways to teach creatively on an online platform.

The product will be used for designing and delivering training programs creatively. A frequently used instructional model for creative teaching is the Torrance Incubation Model of Teaching and Learning (TIM). The TIM "is one of the few models in the domain of creativity whose major purpose is the design and delivery of creativity content" (Murdock, & Keller-Mathers, 2002a, p. 3). Dr. E. Paul Torrance developed the model in the sixties and seventies (Torrance & Safter, 1990) and at the International Center for Studies in Creativity (ICSC) TIM is further developed by Dr. Mary Murdock (one of Torrance's students) and Dr. Susan Keller-Mathers. I am going to use the TIM for my product.

Besides the TIM I am going to use Ekvall's ten dimensions for a creative climate: 1. Challenge; 2. Freedom; 3. Idea support; 4. Trust/ openness; 5. Dynamism/ liveliness; 6. Playfulness/ humor; 7. Debates; 8. Conflicts; 9. Risk-taking; and 10. Idea time (Firestien, 1996, pp. 183-186). Dr. Göran Ekvall identified these dimensions based on his studies of Scandinavian companies. His research focused on what hinders and what supports innovation in organizations.

The purpose of this Master's project is to gain insight in how to provide a creative climate when using an online learning platform. The developed product will identify the opportunities and difficulties of an online creative climate compared to a face-to-face environment. Strategies how to seize the opportunities and overcome the difficulties will be given. These strategies aim to develop creativity during the online learning process and are arranged according the three stages of TIM.

Additional personal goals for this project can be defined as follows: 1. Deepen my knowledge of the Torrance Incubation Model; 2. Deepen my knowledge of the implication of climate dimensions that support or hinder creativity; 3. Deepen my knowledge of online learning; 4. Explore the benefits and drawbacks of some examples of online learning environments; and 5. Enhance my skills to come up with creative solutions for seizing opportunities and overcoming difficulties.

Rationale for Selection

Pursuing this Master's program in Creativity and Change Leadership strengthened my belief that creative thinking skills are essential in life. Improving my creative thinking skills made me grow personally and professionally. No wonder, that as part of my vision I formulated

the wish to teach other people how to enhance their creative strengths and how to use the thinking skills in their work. I realized that digital technology could help me with the actualization of this wish. If I would deliver more training online and less face-to face, I would be able to reach a lot more people by expanding my reach and by saving time.

Everyone has a creative heartbeat and one can learn to be more creative. According to the World Economic Forum creativity is one of the most demanded skills in future jobs (World Economic Forum, 2016). However, a lot of people around me do not think of themselves as creative and (potential) clients do not know how to enhance and use their creative skills. So, there is a market for creativity training, but, as mentioned before, people tend to prefer learning online, or at least want to do part of their learning online or at their own chosen time and place.

Although creativity is a relative young scientific discipline, there are people teaching creativity all over the world. By developing a product about how to design and deliver training programs creatively on an online platform, and using the Torrance Incubation Model as well as Ekvall's dimensions for a creative climate, I might help other teachers and trainers in the creativity field to deliver online in a creative way.

From my experience as a project manager and change consultant in many Information and Communication Technology (ICT) projects, I learned the importance of content and process redesign when transitioning a product or service to a digital environment. If the redesign is left out, disadvantages of the new environment might enlarge and benefits might not be fully utilized. The same goes for creativity training, when transferring it from a face-to face environment to an online environment. Without redesign chances are high learners get disengaged and the training is delivered less creatively. It is not difficult to imagine bored and distracted learners behind their laptops during an online synchronous session. Or of learners struggling alone, because of

the lack of visual connection and collaboration. Fredrik Fogelberg, co-author of "Live Connections: Virtual Facilitation for High Engagement and Powerful Learning" (Fogelberg, & Tavanyar, 2015) confirmed the importance of making a different content design for a virtual training (Personal communication, Nomadic Introduction session 'Getting to know the online classroom', September 13, 2017).

Since online learning has entered the classroom already some time ago, there are abundant resources about online learning and the issues that might arise. "Many empirical studies have been conducted to examine issues in delivering online courses; however, few have synthesized prior studies and provided an overview on issues in online courses" (Kebritchi, Lipschuetz and Santiague, 2017, p. 4). Furthermore, most studies are about asynchronous online learning or on a mix with face-to-face learning. Much less is known about synchronous online learning and more specific about synchronous online learning in a creative way. And the results of available studies need to be translated and applied into practice. Through my Master's project I intend to contribute to the bridge between research and practice.

In the fast changing world we are living in, the way people learn is also transforming. "Personalisation, collaboration and informalisation (informal learning) will be at the core of learning in the future. These terms are not new in education and training but they will become the central guiding principle for organising learning and teaching" (Redecker, Leis, Leendertse, Punie, Govert, Kirschner, Stoyanov, & Hoogveld, 2011, p. 9-10). The use of technology will support this future learning and teaching, as many technologies have a collaborative nature. Piki (2014) wrote that collaborative technologies "provide tremendous potential for promoting learner engagement and collaboration, providing creative mechanisms for teaching and learning, and improving the learning outcomes" (p.108). Stahl, Koschmann and Suthers, (2006) mentioned as

benefits of technology in collaborative learning: the dynamic nature of this technology; the fact that software is configurable; documents and media can be stored, replayed and replicated or modified; and a track record of activities can be held.

SECTION TWO: PERTINENT LITERATURE

For this project I have identified relevant literature and resources in four main areas: 1. Aspects of environments that support creativity; 2. Teaching and learning using the TIM; 3. Examples and experiences of teaching creativity online; and 4. Challenges when teaching in an online environment.

Aspects of Environments that Support Creativity

Creativity is a construct that can be compared to the complexity of something like intelligence. A good way to describe this complex matter is using Rhodes' four P's: Person, Process, Press and Product. To Rhodes, creativity is "the phenomenon in which a person communicates a new concept (which is the product)" (Rhodes, 1961, p.305). In his view the process is the mental activity, which is implicit in his definition, as well as press, because we cannot operate in a vacuum. Press, or "the relationship between human beings and their environment" (Rhodes, 1961, p.308), is a compound phenomenon in itself. Multiple environmental factors and their interrelatedness might influence creativity.

In research examining the aspects that affect creativity, the environment is often referred to as climate. "Climate is defined generally as the perceptions of environmental conditions that shape individuals' beliefs about the work environment" (Friedrich, Stenmark, & Mumford, 2011, p.208). Climate has an influence on "processes such as problem solving, decision making, communications, coordination, controlling, and psychological processes of learning, creating, motivation, and commitment (Ekvall, 1999, p. 405). By having this influence the climate "can enlarge or reduce the effects of the organization's investments and operations" (Ekvall & Ryhammar, 1999, p.303). Stated like this, the educational climate is important for effective

learning.

Environmental factors also influence creativity. Amabile, Conti, Coon, Lazenby, and Herron (1996) distinguished six categories to assess the work environment for creativity: 1. Encouragement of creativity; 2. Autonomy or freedom; 3. Resources; 4. Challenging work; 5. Workload pressure; and 6. Organizational impediments, like high management control, internal conflict or conservatism. The first four categories have a positive influence on a creative environment; the last two have a negative influence.

Dr. Göran Ekvall, a well-known researcher of creative climate, distinguished ten factors to measure the climate for creativity using the Climate for Creativity Questionnaire (CCQ), "an earlier version of the Situational Outlook Questionnaire (SOQ)" (Isaksen, Lauer, Ekvall, & Britz, 2001, p.175). Ekvall defined climate as "the attitudes, feelings, and behaviors, which characterize life in an organization" (Firestien, 1996, p. 182). By assessing the climate for creativity Isaksen, Lauer, Ekvall, and Britz (2001) were able to collect data and describe what was experienced as a good climate for creativity and what kind of climate hindered creativity. They found that a challenging environment, where people were involved and constructive debate was possible, enhanced creativity. Furthermore, a good creative climate can be described as open, dynamic, playful and with little tension. There is time for ideas and as these ideas will be supported by the organization, people are willing to take risks and feel free to organize their work themselves (Isaksen et al., 2001).

The relationship between climate and creativity is a more complex one than described by the assessed dimensions of the SOQ. "Climate aspects stimulate or hamper creativity, but creative outcomes then influence climate" (Ekvall, 1997, p.201). And climate is not the only organizational dimension that affects creative achievement. Ekvall and Ryhammar (1999) found

that the availability of resources has a direct effect on the level of a creative outcome. “Resources in an academic setting refer to such things as information technology facilities, library services, laboratory equipment, assistants, materials, conference rooms, and "short money" for quick, flexible investments” (Ekvall & Ryhammar, 1999, p.308). “Resources and technology can impact the feelings and attitudes of people in the organization by either facilitating or inhibiting appropriate behaviors” (Isaksen et al., 2001, p. 174). The study of Ekvall and Ryhammar (1999) also showed the influence of leadership style, although this was not a direct influence on creative performance: “climate operates in the organization as a lever for leadership” (p.308). The style of a teacher has an impact on the educational climate and therefore might encourage or obstruct creativity.

Dimensions of a Creative Climate

For my project I have chosen to use Ekvall’s creative climate dimensions. Ekvall distinguished ten dimensions, nine that have a positive correlation with creativity, in other words, aspects that support creativity, and one with a negative correlation. The last one is ‘Conflict’, which hinders creativity in an environment. The following description of Ekvall’s ten dimensions is based on Ekvall (1996); Firestien (1996); and Isaksen, & Ekvall (2010). The language of the descriptions is adapted for an educational setting.

1. Challenge indicates the extent to which people are involved in the operations and goals of a course or training program. If people are highly involved, they usually are prepared to contribute in reaching the stated goals and to put a lot of energy in it. People think of their contribution to the learning as joyful and meaningful. If the environment offers low challenge, people become indifferent, which might result in an apathetic attitude.

2. Debate refers to the possibility for learners and teachers to show disagreement on issues, viewpoints and ideas. When debate is possible, different voices are heard equally. There is a shared opinion that debate contributes positively to the learning. In an environment where people can debate, they focus on the ideas and viewpoints, not on the person himself. When there is little debate, people do not learn from other experiences and opinions; they do not question what they learn.

3. Dynamism/ liveliness is about the variety of new things that are happening. Different ways of thinking are used and people are asked to complete various types of assignments. In a dynamic learning environment there is positive energy and surprise. This in contrast to an environment were everything goes as expected and liveliness is low.

4. Freedom is the degree of independence in behavior people experience and show. In an environment in which there is a great deal of freedom, people have more autonomy, they take initiative and share information. People have freedom to define how they work. When there is little freedom, people act as told. In such an environment there is a high level of structure and people tend to perform within that given structure.

5. Idea Support relates to how the environment deals with new ideas. If Idea Support is high, people listen attentively to new ideas and suggestions. Experimenting with new ways of learning are encouraged and change is embraced in a constructive way. If there is little Idea Support, most ideas and suggestions will be ignored or rejected. A frequently heard answer will be ‘no’ or ‘not possible’.

6. Idea Time is the time learners get and use to elaborate, to explore new possibilities or to discuss suggestions. This amount of time is not planned in the original task that has been

given. In an educational setting it is obvious that Idea Time is a must for achieving learning goals. If every minute is specified, time pressure will affect the outcome.

7. Playfulness/Humor is an indicator for a relaxed atmosphere in which people feel at ease and feel free to play and joke. When there is laughter in the 'classroom', changes are higher that people will have a good learning experience.

8. Risk-taking is the degree to which there is a tolerance for ambiguity. In a high risk-taking environment learners can cope with uncertainty. The make decisions even when not all the information they need is available or even when they are not sure what the outcome might be. In a low risk-environment people decide to stay on the so-called safe side. They would rather look for additional information than to take action.

9. Trust/ Openness concerns the emotional safety in relationships between teachers and learners and learners among themselves. Trust and openness are needed to share emotions, opinions and ideas. People feel safe to be honest and to make mistakes. They do not fear to be ridiculed and counter-attacks are not to be expected.

10. Conflict refers to the level of tension that is present in the environment. Conflict differs from Debate, because the tension is personal and emotional. Gossip, plots and interpersonal warfare can characterize a high level of Conflict. In a low level of Conflict environment people act more mature. They are able to reflect and know how to give feedback.

Teaching and Learning Using the TIM

For me, the TIM matches perfectly with the thoughts of two-way learning, collaborative learning and life-long learning. Approaches to learning that meet the needs in the 21st century. I think the following phrase of Murdock, & Keller-Mathers (2008) expresses how well Torrance's

thoughts about teaching creativity fit in the present time. “Approaching creative teaching and learning as a partnership reflects a philosophy of education that values and fosters independent learning, collaboration, shared risk, and interaction. Motivation and engagement are critical components in making these things happen” (p. 16).

The Work of Dr. E. Paul Torrance

Dr. E. Paul Torrance was an American psychologist who became famous through his pioneer work in the field of creativity. His research in creativity and education is extensive. He considered creativity as part of human abilities and therefore believed creativity is within the reach of every human being and not just of a number of geniuses. Torrance defined creativity as follows:

> Creativity is a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and finally communicating the results. (Hébert, & Cramond, & Speirs Neumeister, & Millar, & Silvian, 2002, p.14).

His definition of creativity emphasized on a learning process. Defining creativity was just a start; Torrance wanted to know what creative behavior looked like and how it could be enhanced. He developed a model that consists of the elements ability, skill and motivation. In the model creative behavior is described as the intersection of these three elements. The elements of the model and their interaction “could be researched and then used to predict creative behavior” (Murdock & Keller-Mathers, 2008, p. 15).

In his search for ways how to release creative potential, especially in children, Torrance

needed means to measure this potential (Hébert et al., 2002). For this he developed the Torrance Tests of Creative Thinking (TTCT), which are still widely used. Through his research on these tests Torrance composed a set of eighteen creativity skills as listed in figure 1. This skill set is used in Torrance's Incubation Model, a "model for the design and delivery of creative teaching and learning" (Murdock & Keller-Mathers, 2008, p. 18).

'Beyonder' Skills that Can Be Used to Teach/Train Creativity

The Problem: recognition or awareness of a situation; definition of the problem and commitment to deal with it; recognizing the essence of the difficulty and identifying sub problems that are manageable or can be solved.

Produce and Consider Many Alternatives: fluency; amount; generating many and varied ideas.

Be Flexible: creating variety in content; producing different categories; changing one's mental set to do something differently; perceiving a problem from different perspectives.

Be Original: moving away from the obvious; breaking away from habit bound thinking; statistically infrequent responses; the ability to create novel, different or unusual perspectives.

Highlight the Essence: identifying what is most important and absolutely essential; discarding erroneous or relevant information; refining are dealers, abandoning unpromising information; allowing a single problem or idea to become dominant and synthesizing all of this at the same time.

Elaborate-But Not Excessively: adding details or ideas--developing them; filling in details for possible implementation.

Keep Open: resisting premature closure; resisting the tension to complete things in the easiest, quickest way.

Be Aware of Emotions: recognizing verbal and nonverbal cues; responding, trusting and using feelings to better understand people and situations.

Put Your Ideas in Context: putting parts of experience into a bigger framework; putting experiences together in a meaningful way; making connection between things; giving situations and ideas a history, and background, a story.

Combine and Synthesize: making new connections with the elements within our perceptual set; combining a relatively unrelated elements; hitchhiking; making the familiar strange and the strange familiar.

Visualize It-Richly and Colorfully: using vivid, exciting imagery; creating colorful and exciting images that appeal to all five senses.

Enjoy and Use Fantasy: imagine, play and consider things that are not concrete or do not yet exist.

Make It Swing! Make It Ring: using kinesthetic and auditory senses; responding to sound and movement.

Look at It Another Way: being able to see things from a different visual perspective; being able to see things from a different psychological perspective or mindset.

Visualize the Inside: paying attention to the internal dynamic workings of things; picturing or describing the inside of things.

Breakthrough-Expand the Boundaries: thinking outside prescribed requirements; changing the paradigm or system within which a problem resides.

Let Humor Flow and Use It: perceiving incongruity; responding to a surprise; recognizing and responding to perceptual and conceptual discrepancies.

Get Glimpses of the Future: predict, imagine and explore things that do not yet exist; wonder and dream about possibilities; view events as open-ended.

Source: Torrance, E. P. & Safter, H. T. (1990). *Making the creative leap beyond.* Buffalo, NY: The Creative Education Foundation.

Figure 1. Creativity skills as published in Murdock & Keller Mathers (2008, p.16)

The Torrance Incubation Model of Teaching and Learning

Dr. Torrance " believed that research alone on any topic was not enough, and that teachers needed solidly researched materials to help them more easily make creativity deliberate and useful to learners" (Murdock & Keller-Mathers, 2008, p. 18). Furthermore, Torrance foresaw that rational thinking solely would not meet the needs of future life. An opinion that is still relevant nowadays, an era in which creativity is named as one of the most important 21st century skills. Based on this belief Torrance argued that changes in education had to be made and he developed a teaching and learning model that involved multiple ways and levels of thinking, the so-called Incubation Model (Torrance, & Safter, 1990). "The concept for the incubation model goes back as far as his work in mental health in 1949" (Murdock, & Keller-Mathers, 2002a, p. 3), but it lasted until 1979 before Dr. Torrance published a paper about this instructional model in the Journal of Creative Behavior (Torrance, & Safter, 1990).

The Torrance Incubation Model of Teaching and Learning (TIM) is divided in three stages and each stage has several strategies (see figure 2 op page 15). These strategies "are designed to guide teachers or trainers to motivate and engage learners in a creative way" (Murdock, & Keller-Mathers, 2002a, p. 10).

> Before creative thinking can occur, something has to be done to heighten anticipation and expectation and to prepare learners to see clear connections between what they are expected to learn and their future life (the next minute or hour, the next day, the next year, or 25 years from now). After this arousal, it is necessary to help students dig into the problem, acquire more information, encounter the unexpected, and continue deepening expectations. Finally, there must be practice in doing something with the new information, immediately or later (as cited in (Hébert et al., 2002, p. 25).

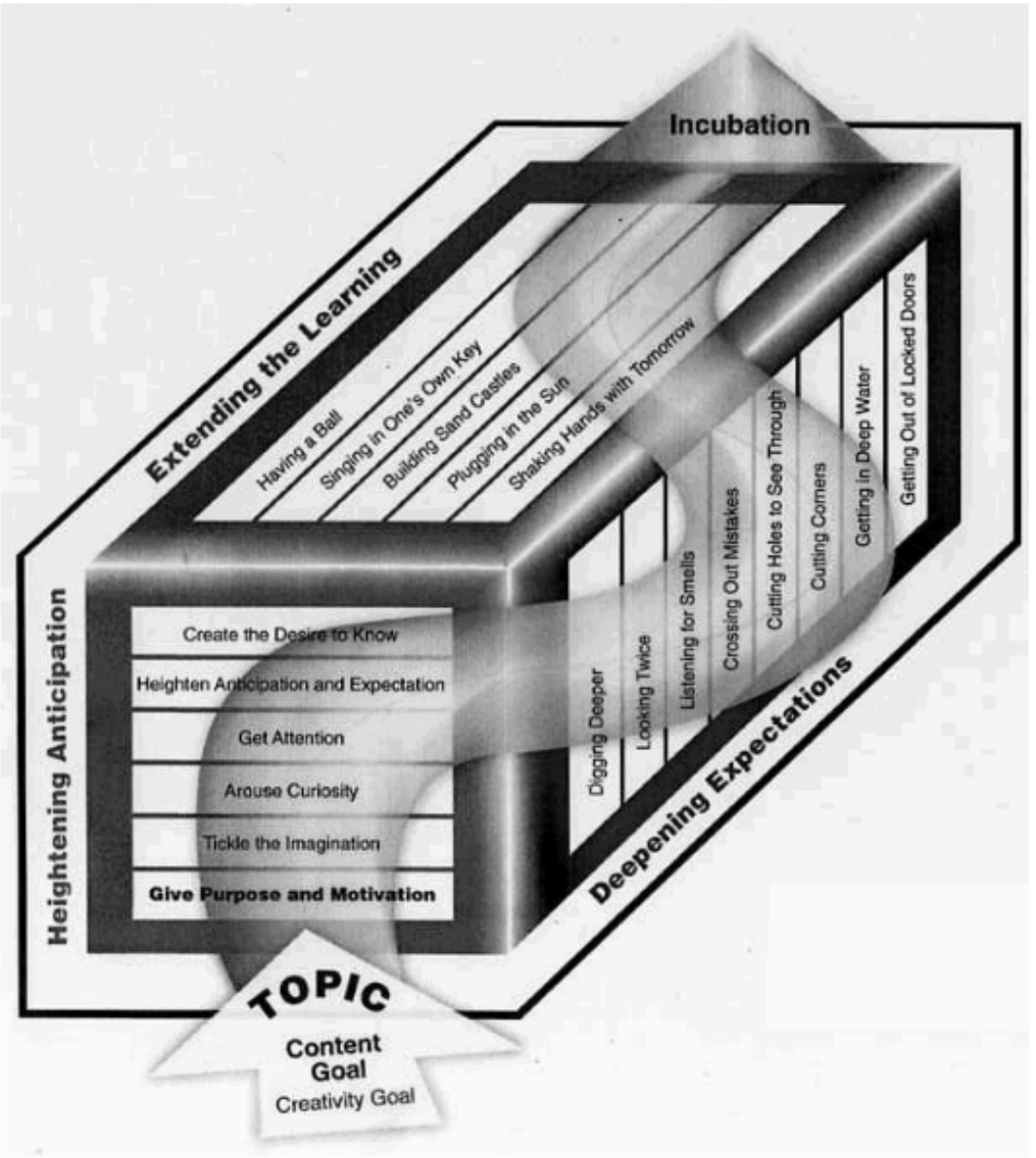

Figure 2. TIM stages and strategies as published in Murdock & Keller Mathers (2008, p.12)

The first stage of the TIM is called 'Heightening Anticipation' and is designed to warm up the learning. Activities in this phase focus on becoming curious about the topic, getting ready to learn and stimulating imagination. The strategies used in the stage 'Heightening Anticipation' of the TIM are described as: (a) Create The Desire To Know; (b) Heighten Anticipation and Expectation; (c) Get Attention; (d) Arouse Curiosity; (e) Tickle The Imagination; and (f) Give Purpose and Motivation.

For the second stage, 'Deepening Expectations', Torrance used metaphors to describe the

strategies that can be used. The activities help students to

> (1) heighten awareness of the problem or challenge; (2) accept limitations and improve with what is available; (3) engage in creative problem solving; (4) use deliberate elaboration; (5) deal with incomplete information and requires them to fill in gaps; (6) maintain open-endedness; (7) deal with the unpredictable or predict from limited information; (8) acquire new skills; or (9) consider surprises (Keller-Mathers, & Murdock, 2002, p. 8).

The third and final stage of the TIM is meant to keep the learning going after the interaction between teacher and learner has taken place. It is the phase of 'Extending the Learning' and in this stage the connection with the real life of the learner is made. Like in the second stage, Torrance has used metaphors to describe the strategies in this stage:

> (a) Having a Ball: pay attention to fun uses of the mind--humor, laughter and fantasy; (b) Singing in One's Own Key: give personal meaning to information; relate personal experience to information; make associations to information; see implications for present problems or future career roles; use information to solve personal problems; (c) Building Sandcastles: use information as the basis for imagining, fantasizing, searching for ideal solutions or otherwise taking off from what is been read, heard, or encountered; (d) Plugging in the Sun: engage in hard work to follow up on information; find available resources of energy and inspiration; explore library resources, people resources, place resources, or spiritual resources; and (e) Shaking Hands with Tomorrow: relate information to one's career or future career; use information to enlarge, enrich, and make more accurate one's images of the future; search for alternative solutions for possible future use; use information to propose a solution for a future problem. (as cited in

Murdock, & Keller-Mathers, 2008, p.14).

The TIM can be used to teach any content creatively. When using TIM to design a lesson, each lesson focuses on one creativity skill from the skill set as described in figure 1 on page 13. Furthermore, each lesson has two learning objectives, the content objective and the creativity objective. If you are teaching creativity, the two objectives might be the same (Keller-Mathers, & Murdock, 2002).

There is no rule for the duration of each stage, and not for the lesson in total. This would contradict the nature of incubation of the model. "In the creativity literature, incubation has long been recognized as a process that helps people access information that is not readily available to the rationale, conscious mind" (Murdock, & Keller-Mathers, 2008, p.19) and in this way incubation is important to help people to come up with new, original ideas for complex problems. By integrating the incubation process in the TIM, Torrance made the process more accessible and deliberate, resulting in a deepening and extension of the learning. The model motivates learners to find new perspectives and to search for the unknown, and so should the teacher.

Although the description of the TIM might give the impression that the model is linear, and therefore little distinctive from other three phase learning models, "the strategies are not presumed to be linear. In practice the model is iterative or recursive, moving in a spiral as the momentum builds" (Murdock, & Keller-Mathers, 2002a, p.10). This requires teacher's flexibility and the willingness to act on what is happening.

Examples and Experiences of Teaching Creativity Online

Teaching online and using digital technology comes in all kinds of forms. In appendix A

an overview of concepts is given. Via literature and interviews I have explored several examples and experiences of teaching creativity online. Some of my findings are described on the following pages: experiences with a 3D virtual world and experiences with a Massive Open Online Course (MOOC).

Facilitating and Teaching Creativity in a Virtual World

In 2010 Uribe and Cabra explored the possibilities of facilitating the Creative Problem-Solving (CPS) process in a 3D virtual world, called Second Life. The researchers wanted to learn "whether such an environment was conducive to remote synchronous creative collaboration" (p. 167). The authors reported that the 3D virtual space was a good resemblance of a physical space, which gave a positive effect to collaboration. The use of a virtual excursion was a huge success. Such an excursion would not have been possible in real life, when one is dependent of weather and other environmental conditions. Although the facilitation was well received by the participants, the experiment did not result in further use of Second Life. The use of the technology was too complex and not intuitive enough (Personal communication Dr. John Cabra, October 4, 2017).

As a Master's project Juliana Sanchez (2011) built a virtual environment using the software OpenQwaq. The project outcome was "a prototype of a virtual space to deliver an introductory course of Creative Problem Solving Thinking Skills Model through the use of technology" (Sanchez, 2011, p.1). The project paper does not report about the actual use of the virtual environment, but it demonstrates the amount of work that was needed to build a virtual space. Similar to the experience with Second Life, Sanchez (2011) was positive of the possibilities of turning a virtual space into a place where people could be inspired.

Burnett, Cabra, and Burnett, A. (2013) performed a pilot study with Qube, a software program based on OpenQwaq. They also found promising results, although technical issues were the most prominent in the evaluation. The authors mentioned positive effects on the learning due to the use of the 3D virtual environment. "The sense of shared place allowed students, at a distance, to occupy a single 'location' and more naturally practice behaviors, with their classmates. Students became more emotionally involved in and connected to the learning" (Burnett, Cabra, and Burnett, A., 2013, p.2). Furthermore, by implementing elements in the 3D room for which different senses had to be used the virtual space helped students in recalling and applying the learning. The space also encouraged people to modify it to their personal needs, something which is much more difficult in a real life location. Dr. John Cabra (Personal communication, October 4, 2017) evaluated the use of Qube more intuitive as Second Life, but still the learning curve was too steep. This is one of the reasons he stopped using the platform. Another reason is the availability of the technological requirements. Not all students have a stable Internet connection that is fast enough for the use of a virtual world. In my conversation with Dr. Cabra (Personal communication, October 4, 2017) we discussed the need for a 3D virtual world. Would a 2D synchronous online environment not be sufficient? For me, working with an avatar is more disturbing than contributing to my learning. Dr. Cabra agreed that a 3D virtual environment can cause distraction, but on the other hand such a space offers opportunities to make people feel more involved. A 3D virtual world might enhance student's understanding, because they can position themselves in several ways and look at things from different angles. An avatar can fly, which is a unique feature. From my own experience with Qube, I could tell that it is great to create a gallery and show your project work. I felt it was more rewarding than just sending a file or talking about it in a Skype (See Appendix B for Examples of software). So,

using a virtual 3D world must meet your requirements and goals. If you do not need a space like that, it is too much trouble to create a specific space.

A Massive Open Online Course in Creativity

What makes a course a Massive Open Online Course (MOOC)? According to Miller (2014) these courses are characterized by: "1. collections of online multimedia source material such as video lecturers; 2. online assignments and tests; and 3. mechanisms for students to discuss course material and comment on each other's work" (Miller, 2014, p. 3). As the term 'massive' already implies, a MOOC is designed to teach a large amount of learners at once. That's why there is usually no or little interaction with the teacher or trainer.

The MOOC Ignite Your Everyday Creativity is hosted by the International Center for Studies in Creativity and taught by Dr. Cyndi Burnett and Dr. John Cabra. Participants evaluate the MOOC positive: 4.3 out of 5 of 151 ratings (https://www.coursera.org/learn/ignite-creativity). However, this is just a small number of responses compared to the more than 100.000 people that have signed up for this MOOC in the past 3 years (Personal communication Dr. Cyndi Burnett, October 5, 2017). This might be related to a common downside of a MOOC: the large amount of learners who do not complete the course. A downside why some educators doubt the effectiveness of a MOOC (Miller, 2014).

Burnett and Cabra designed the MOOC Ignite Your Everyday Creativity using the TIM. The course design follows Rhodes four P's: Person, Product, Process and Press (Rhodes, 1961). It is a full undergraduate course and meant to introduce learners in the subject of creativity. Assignments are assessed by peer reviews; there is no grading by the instructors. (Personal communication Dr. Cyndi Burnett, October 5, 2017).

Looking back on the years that the MOOC is used, Dr. Cyndi Burnett mentioned the increased awareness of their own creativity it gives to learners. Learners were positive of the peer assessments. Another downside of the MOOC is the time investment that was needed to develop the video material. Dr. Burnett suggested that it would be best to start with a small module, experiment with it and then improve and develop further. (Personal communication Dr. Cyndi Burnett, October 5, 2017).

MOOC's can be offered through platforms that are specialized in offering education online in cooperation with universities. An example of such a platform is Coursera (https://www.coursera.org). Such a platform might also offer educational services. For instance, Coursera has class mentors, who answer learner's questions. These class mentors sometimes forward a learner's question to the instructor of the MOOC (Personal communication Dr. Cyndi Burnett, October 5, 2017). This might compensate the absence of interaction with the teacher or trainer a bit, but to me this is a big downside for a creative learning environment.

Challenges When Teaching in an Online Environment

My exploration resulted in challenges, points of attention and possible directions for teaching online. These are summarized in three themes: preparation, getting started and designing a training program.

Transitioning to Online

As a trainer and student myself, I know what is to gain by being prepared for a training or course. Preparation in this context also means being ready to go online. Readiness is not obvious. A study of Hung, Chou, Chen and Own (2010) showed that Taiwanese students were confident about their computer skills, however, I would say that if in an educational setting

software is used, that people are not acquainted with on a mere daily basis, most of the adult people will feel lost at first. Kebritchi, Lipschuetz, and Santiague (2017) conducted a literature review to identify issues related to online learning and teaching and found that learners' readiness was one of the major issues. The readiness was associated with learning styles and cultural differences, but also with technical skills (Kebritchi, et al., 2017).

The above means that when selecting a communication or collaborative platform, it is essential the software has a user-friendly interface and the use of the software is easy and quick to learn. These are important features, reinforced by the findings of Burnett et al. (2013). Another important aspect in choosing an online solution is the fit to the task. Although it might be obvious that a chat program is not suitable for having difficult conversations, this is happening. When, like in a platform, several features are built in an online solution, it is important to agree how and when these features are used. For example, do learners use the Blackboard mail feature or their own emailing program? (Fogelberg & Tavanyar, 2015).

In their research Kebritchi, et al. (2017) also found issues concerning teachers' readiness: "The challenge to effectively transfer what is taught in the face-to-face classroom to online continues to be a problem" (p. 16). The challenges instructors have when transitioning to an online environment deal with lack of interest, insufficient knowledge of how to prepare for an online class, needed change of teaching style and shortage of experience with technical tools (Kebritchi, et al., 2017).

Learners' as well as teachers' readiness also signifies the extent to which one is open to learn via a virtual environment. Some people believe that face-to-face learning is better (Smith Jaggars, 2014). Socio-demographic and personal aspects will have impact on the openness for online learning.

The Onboarding Process

To overcome some of the technical problems that might arise in an online learning environment, it is useful to build in time for getting used to the platform before the start of the formal learning process. Based on years of practical experience with virtual sessions, Fogelberg and Tavanyar (2015) recommended organizing a kick off session for learners to get acquainted with the online environment. When working on a known platform, they advised to do a technology check with every participant before the start of a virtual training program.

When a synchronous online environment is used, it might be wise to appoint a so-called producer, who can solve a lot of technical issues that influence learner engagement. A producer is "the person who deals with the technical aspects of the virtual event – whatever it may be – working in the background to ensure the virtual session runs smoothly" (Fogelberg and Tavanyar, 2015, p. 39). The producer is there all the time, which is different from an ICT consultant that can be called when something goes wrong.

Like in a real life setting, it is important that learners get to know each other before a course or training session starts. In a face-to-face environment this usually comes with a cup of coffee or tea. Depending on the context, for example a one-time short training, such a meeting can take place in an online synchronous environment and does not necessarily have to be a face-to-face meeting. Fogelberg and Tavanyar (2015) have built a virtual coffee corner experience for their virtual sessions. This can be simply done by showing an image of such a corner.

Designing for Online Learning

For the design of an online training or course it is important to select "appropriate learning activities which are designed in a way that promotes collaboration and inspires students to learn how to approach learning tasks and how to engage with the learning content and with

each other – through technology" (Piki, 2014, p.115). For synchronous online learning it is relevant to focus on collaboration and interaction, which is not different from a face-to-face environment. Finn and Zimmer (2012) already found that "instructional approaches that require student- student interactions (e.g., cooperative learning), encourage discussion, or support the expression of students' viewpoints (e.g., use of dialogue)" (p.106) facilitate learner engagement. Technology should support these activities and there must be a fit between the technology used and the task at hand.

Jena (2016) promoted "to incorporate a variety of learning activities to accommodate different learning styles " (p.949). His research on learning styles and attitudes towards the use of virtual learning environments showed that "assimilators and divergent learners are inclined more towards the virtual learning environments. This means that those learners who like to learn through thinking and watching and thinking and doing would learn better with virtual learning environments" (Jena, 2016, p. 955). Therefore teachers and trainers need to recognize the different learning styles and use multiple approaches to meet the needs of their learners.

"Learning environments frame specific tasks and social relations, and thus expect particular profiles of reflexivity" (Kahn, Everington, Kelm, Reid, & Watkins, 2017, p. 216). These profiles of reflexivity in online learning environments were studied by Kahn et al. (2017). They found that in online learning environments a more varied pattern of reflexivity is needed to achieve positive learning outcomes. For the design of a course it is advised to pay attention to the reflexivity of the students explicitly. This might be done by reaching out to students, inviting them to share insights, encouragement for further research and by identifying common interest (Kahn et al. 2017).

SECTION THREE: PROCESS PLAN

Plan to Achieve Goals and Outcomes

My Master's project will result in a product that describes the opportunities and difficulties to provide a creative online learning environment. The product will use Ekvall's ten dimensions of a creative climate (Ekvall, 1996) for identifying these opportunities and difficulties. Applying the three stages of TIM, strategies will be developed to seize these opportunities and overcome the difficulties.

To achieve my goals I will continue to read relevant literature and deepen my knowledge of online learning, the use of TIM and the interpretation of Ekvall's dimensions. Furthermore, I will have interviews with professors at ICSC and with some professionals in the field to learn more from their experiences with several online environments. And last but not least, I will search for inspiration to design and deliver online lessons creatively.

Throughout the project I will keep a project log, which will help me to capture my insights and to write my project paper. It will also serve as a resource for conversations with my advisor, Dr. Nur Cayirdag, and process buddy, Nicolette Wever. The project log will also be useful in monitoring my progress.

After having gathered all the necessary information, I can start to collect and organize the data for my product. The simplest version of my product looks like a table with on one axis the stages of TIM and on the other axis several dimensions of Ekvall. In each intersection suggestions for how to go about in that particular situation are given. For instance, when the dimension is Trust and the TIM stage is Heightening Anticipation, an online strategy to get connected with participants is described. In the final phase of my project I will design a more attractive and visual format for the table.

My personal goals will be achieved while developing the project product. In the first phase of the project (see Project Timeline in the next paragraph) I will explore the benefits and drawbacks of some examples of online learning environments by interviewing experts and by reviewing literature. In this phase I will also deepen my knowledge of the TIM and of Ekvall's dimensions, which will go on while I am developing the product. After the framework of the product is set, I will describe all the elements of the product. This work will help me to enhance my creative skills by thinking of strategies suitable for the different climate dimensions and TIM stages.

Project Timeline

My project is divided in five phases: 1. Explore and gather data; 2. Analyze and structure data; 3. Develop the product; 4. Finalize product; and 5. Finalize project. For each phase I have estimated an amount and period of time. A project timeline with more details is shown on the next page.

Explore and gather data (30 hours): September 11 – October 1;

Analyze and structure data (20 hours): October 2 – October 15;

Develop the product (30 hours): October 16 – November 12;

Finalize product (20 hours): November 13 – November 26;

Finalize project (10 hours): November 27 – December 15, 2017.

In each phase of the project I will work on the product and on my project paper. This means phase one and two focus on the content for sections one through three of the project paper. This part will be submitted on October 20th, 2017. Phase three and four focus on development of the product, on outcomes, key learnings and conclusions. This will result in

submitting sections four through six of the project paper on November 17th, 2017. The last phase is for evaluation and adaption to finalize the project. On December 15th, I will present my project and publish my project paper.

Master Project Conny van der Wouw	Explore and gather data			Analyze and structure data		Develop product				Finalize product		Finalize project		
	wk 37	wk 38	wk 39	wk 40	wk 41	wk 42	wk 43	wk 44	wk 45	wk 46	wk 47	wk 48	wk 49	wk 50
	11-Sep	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	23-Oct	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec
Submit Concept Paper	15-Sep													
Literature review E-learning														
Introduction session Nomadic platform														
Literature review TIM														
Prepare interview questions for experts														
Select and invite experts for interviews														
Literature review examples of online learning														
Interview experts														
Analyze and structure data														
Start developing product														
Submit Paper Sections 1-3						20-Oct								
Develop product framework														
Develop and detail product														
Invite people for evaluation of the product														
Write Paper Section 4														
Evaluate product														
Adapt product														
Finalize product														
Write paper Sections 5 and 6														
Submit Paper Sections 4-6										17-Nov				
Revise and finalize Paper Sections 1-6														
Submit Paper Sections 1-6												28-Nov		
Revise and finalize Project Paper														
Prepare project presentation														
Submit Final Project Paper													8-Dec	
Presentation and publishing project														15-Dec

Figure 3. Project timeline

Evaluation Plan

As mentioned before I will keep a project log and discuss my progress and insights with my advisor and process buddy on a two-week basis.

I will ask two or three people to review the project product: one creativity professional with experience in teaching online, one person with experience in teaching using TIM, and one creativity trainer without a specific focus. For this evaluation, I will create a survey, so that I am

able to compare the feedback and select what I want to use for finalizing my product.

Furthermore, my advisor, Dr. Nur Cayirdag, will formally evaluate the product and project paper. Based on all the evaluation material I will adapt the product and adjust my paper in the final phase of my project.

Finally to close this project and the Master program, I will create an action plan for using my product and bringing it further. If I can use the project product directly, without additional actions, I know I have been successful. If I have to take other steps before applying the product in my work, I might also consider the project successful, because of the learnings and the achievement of my other, more personal, goals. My write up will serve as an instrument to measure this success.

SECTION FOUR: OUTCOMES

In this section the process and outcomes of my project are described. The section starts with the phase of exploring and gathering data, followed by the phase of analyzing and structuring the data in order to create a product format. In the last two paragraphs of this section a description of developing and finalizing my Master's product is given.

Exploring and Gathering Data

In addition to reading literature, I had interviews with Dr. John Cabra and with Dr. Cyndi Burnett. The interviews are used for the literature section (Section 2) and have helped me developing my final product. Some of my readings were about the experiences Cabra and Burnett had with facilitating and teaching in a virtual world. By talking with them I could ask further questions and hear them highlighting the essence. The interview with Dr. Cabra was focused on experiences in a virtual world and the one with Dr. Burnett on experiences with ICSC's MOOC (See Appendix C for Interview questions). Furthermore, the interviews gave me insights that influenced the way I structured the product in the end. This happened during the phase of analyzing and structuring, which will be described in the next paragraph.

I also wanted to experience some online formats myself. Before my Master's project started I got a demonstration of Stormz, collaboration software for live and online use (See Appendix B for Examples of software). The demonstration and the bit of practicing I did with Stormz, showed me the power of technique. For instance, in a face-to-face session you have to take several measures to prevent that there is a lot of social influence when ideas are selected. With software it is much more easier to show the selected ideas after every participant has made his choices. The practicing with Stormz also showed me some limitations. Although Stormz

offers a lot of tool templates, some tools have to be adjusted in order to use them with the software. The time that I have practiced with Stormz was too short to judge if and how these adaptions influence the effect of the use of a tool. In general, it is something to bear in mind, that tools may have to be modified or even ought to be modified to get a desired outcome.

In the first phase of my Master's project I signed up for an interactive introduction of the online classroom used by Nomadic International Business Psychology (www.nomadicibp.com). Their online classroom is built with Cisco WebEx Training Center (See Appendix B for Examples of software). In this demonstration I learned about features of this platform and I got inspired in how to use some tools from my current training sessions online. The importance of good performance of the technology and of participants that are prepared using this technology was one of the main things covered in this introduction session. By being a participant myself I learned from the expertise of Nomadic what to do before an online synchronous session starts.

I also joined a webinar about disruptive trends in virtual learning, which gave me not only new information about online learning, but also the opportunity to experience a webinar (See Appendix A for Explanation of concepts). In this webinar there was little interaction and no video component, the presenter could only be heard. There was the suggestion of other participants being online, for example by showing results of a poll that you had to complete, but it was not clear if they were really there. It was like being in a real life lecture, where you could not see or feel the presence of anybody else. This influenced my energy and motivation negatively and I did not see the point of being online synchronously other than for commercial reasons. What I liked about the webinar were all the different things that were available while the presentation was going on. This can be distractive, but in the way it was done, it was more a prevention of getting bored by only listening. You could look at the slides, have a virtual tour of

the platform or read sources. Because all this related to the content that was offered, people keep involved with the subject. Otherwise, when attention is lost, participants would have started handling their e-mail or visiting social media, things that have nothing to do with the content.

As another experience I signed up for ICSC's MOOC Ignite Your Everyday Creativity. I did not have the intention to pursue the whole MOOC nor to complete the assignments, but I wanted to see the components of the MOOC and how it was designed. This was a great addition to what Dr. Burnett told me during the interview. I learned how the videos heightened the anticipation and what was done to deepen and extend the learning.

Other input that I used for the development of my product was my own experience with Blackboard, Skype and Zoom (See Appendix B for Examples of software), software applied during my study.

Analyzing Data and Structuring a Product Format

When I wrote my concept paper, I had the intention to develop a product based on how to apply TIM in several online environments. Because I value the practical side, I also planned to develop an example of a one-page online TIM lesson. This lesson would show how my product could be applied. The product itself should serve as guidance for creativity trainers and teachers designing content in a way that it can be delivered creatively on an online platform. Analyzing the data gained by reading, interviews and online experiences, I realized that the difference between face-to-face and online training had less to do with applying the TIM and more with offering an effective and creative learning environment.

A big issue that kept coming up in the literature and when talking with experts is the use of the technology. Although this is a big issue, I did not want my product to focus on technology

or one particular software product. Given the high rate of changing software, my Master's product would become outdated very fast. Besides, the challenge of taking care of good performance of the technology might not be that different from a face-to-face environment. Or as Miller (2014) put it:

> And it isn't as tough the face-to-face classroom is free of logistical challenges – those coveted well-illuminated, perfectly temperature-controlled lecture halls with flexible seating arrangements don't come easily either. We simply may not notice these types of challenges as much, given that they are usually the more familiar to us (p.30).

I felt I needed an approach in which it became more clear how differences between a face-to-face and online environment were of influence on delivering a training creatively. After a discussion with my advisor Dr. Nur Cayirdag I decided to make use of Ekvall's dimensions for a creative climate for the development of my product.

Although applying these climate dimensions seemed to be a better fit, I still was struggling with the format of my product. How to put together a valuable product for teaching creativity creatively based on TIM and Ekvall's climate dimensions? I put the stages of TIM on a horizontal axis and the climate dimensions on a vertical axis and started to complete the table row by row. I think my struggle is well illustrated by the fact that I created all kind of side products to give me a head start with the table, the final product. I described how I would approach each row and how I could evaluate if I had applied the TIM model correctly. I also made mind maps of the climate dimensions. I guess my eagerness to bring into practice what I had learned by starting to design on an online platform increased my struggle. I had to find a balance between a product that I could use as a solid base for future use and the practice that was needed to improve the product and to migrate training services to an online environment. While

completing the first row of the table, which was about challenge, I felt dissatisfaction about the result. I tried to defer my judgment and handle my tendency towards perfectionism, but when I received feed back from Dr. Cayirdag, I was sure this was not the product that I wanted to deliver. Looking at the product I was developing, I was designing lesson plans based on TIM to teach Ekvall's dimensions on an online platform instead of providing strategies to support Ekvall's dimensions for a creative climate when teaching online and using TIM. Although I learned a lot of the teaching model and the climate dimensions by designing the lesson plans, I knew I would not achieve a successful result for my project, if I continued this way.

Based on the feed back of Dr. Cayirdag I designed a new framework for my product, which turned out to be my final product for this project. The product is described in the next paragraph.

Developing the Final Product

The final product is a table with on one axis the stages of TIM (horizontal) and on the other axis the climate dimensions of Ekvall (vertical). In each intersection suggestions for how to go about in that particular situation are given. For instance, when the dimension is Challenge and the TIM stage is Heightening Anticipation, one or more strategies for having a healthy challenging environment on online learning platforms during the heightening anticipation are described (see Table 1 on page 34).

As I considered not all the climate dimensions were equally important for my purpose, I have used a Card Sort to prioritize Ekvall's climate dimensions. A Card Sort is a "tool that helps you to compare, rank, and prioritize promising options" (Miller, Vehar, Firestien, Thurber, & Nielsen, 2011, p. 53). I first selected the dimension of which I thought the strategies were

TIM Stage / Ekvall Dimension	Heightening Anticipation	Deepening Expectations	Extending the Learning
Challenge	Strategies during the heightening anticipation stage for having a healthy challenging environment on online learning platforms	Strategies during the deepening expectations stage for having a healthy challenging environment on online learning platforms	Strategies during the extending the learning stage for having a healthy challenging environment on online learning platforms
Risk-taking	Strategies during the heightening anticipation stage for having an online environment in which it is safe to take risks and where there is	Strategies during the deepening expectations stage for having an online environment in which it is safe to take risks and where there is tolerance for ambiguity	Strategies during the extending the learning stage for having an online environment in which it is safe to take risks and where there is tolerance for ambiguity
Trust/ Openness	Strategies during the heightening anticipation stage for having an emotionally safe and open online environment	Strategies during the deepening expectations stage for having an emotionally safe and open online environment	Strategies during the extending the learning stage for having an emotionally safe and open online environment
Conflict	Strategies during the heightening anticipation stage for having a reflective and low-tension online environment	Strategies during the deepening expectations stage for having a reflective and low-tension online environment	Strategies during the extending the learning stage for having a reflective and low-tension online environment
Debate	Strategies during the heightening anticipation stage for having an online environment in which different voices are heard equally	Strategies during the deepening expectations stage for having an online environment in which different voices are heard equally	Strategies during the extending the learning stage for having an online environment in which different voices are heard equally
Playfulness/ Humor	Strategies during the heightening anticipation stage for having a playful and relaxed atmosphere online	Strategies during the deepening expectations stage for having a playful and relaxed atmosphere online	Strategies during the extending the learning stage for having a playful and relaxed atmosphere online
Dynamism/ Liveliness	Strategies during the heightening anticipation stage for having an online environment where there is variety, surprise and positive	Strategies during the deepening expectations stage for having an online environment where there is variety, surprise and positive energy	Strategies during the extending the learning stage for having an online environment where there is variety, surprise and positive energy
Freedom	Strategies during the heightening anticipation stage for having an online environment with a high level of independence in behavior	Strategies during the deepening expectations stage for having an online environment with a high level of independence in behavior	Strategies during the extending the learning stage for having an online environment with a high level of independence in behavior
Idea Support	Strategies during the heightening anticipation stage for having an online environment in which ideas and change are embraced	Strategies during the deepening expectations stage for having an online environment in which ideas and change are embraced	Strategies during the extending the learning stage for having an online environment in which ideas and change are embraced
Idea Time	Strategies during the heightening anticipation stage for having time to elaborate, explore and discuss in an online environment	Strategies during the deepening expectations stage for having time to elaborate, explore and discuss in an online environment	Strategies during the extending the learning stage for having time to elaborate, explore and discuss in an online environment

Table 1. Structure of final product

obvious, easy or similar to a face-to-face environment. So the dimension, I considered the least challenging when comparing an online platform to a face-to-face environment. The next dimension I selected was the one I considered the most challenging. So, now I had ranked dimension 10 and dimension 1. Then I selected the one I thought was the least challenging of the remaining dimensions, number 9, and the one most challenging as number 2. I continued following this process until all dimensions were ranked. The result was as follows: 1. Challenge; 2. Risk-taking; 3. Trust/ Openness; 4. Conflict; 5. Debate; 6. Playfulness/ Humor; 7. Dynamism/ Liveliness; 8. Freedom; 9. Idea Support; 10. Idea Time.

After prioritizing I started to work on the climate dimension challenge and completed the first row of the table. I did this for three rows, but then followed a more natural way by using the gathered data as a guide for describing all the strategies. This was not only less time-consuming, it also turned out that the order of the card sort was not the order of most challenging strategies when shifting from a face-to-face to an online environment.

Each climate dimension is described in a similar way. First a written explanation of the dimension is given (see section 2, pp. 9-11), followed by a mind map with key words. An example of the dimension Trust/ Openness is given in figure 4 on page 36.

Next a summary is given of the difficulties one might encounter in an online environment to support the dimension that is discussed. For example, one of the difficulties of creating a playful online learning environment might be that spontanuous (re)actions are hindered when there is asynchronity. These diffulties are also visualized, see example in figure 5 on page 36.

Finally strategies are given to overcome these difficulties in each stage of the TIM. The strategies are listed per stage and vary in level of complexity. In figure 6 on page 37 examples of strategies for the dimension Dynamism/ Liveliness are given.

Some of the strategies are described more in detail in the last part of the product, because of their level of complexity.

Figure 4. Keywords dimension Trust/ Openness

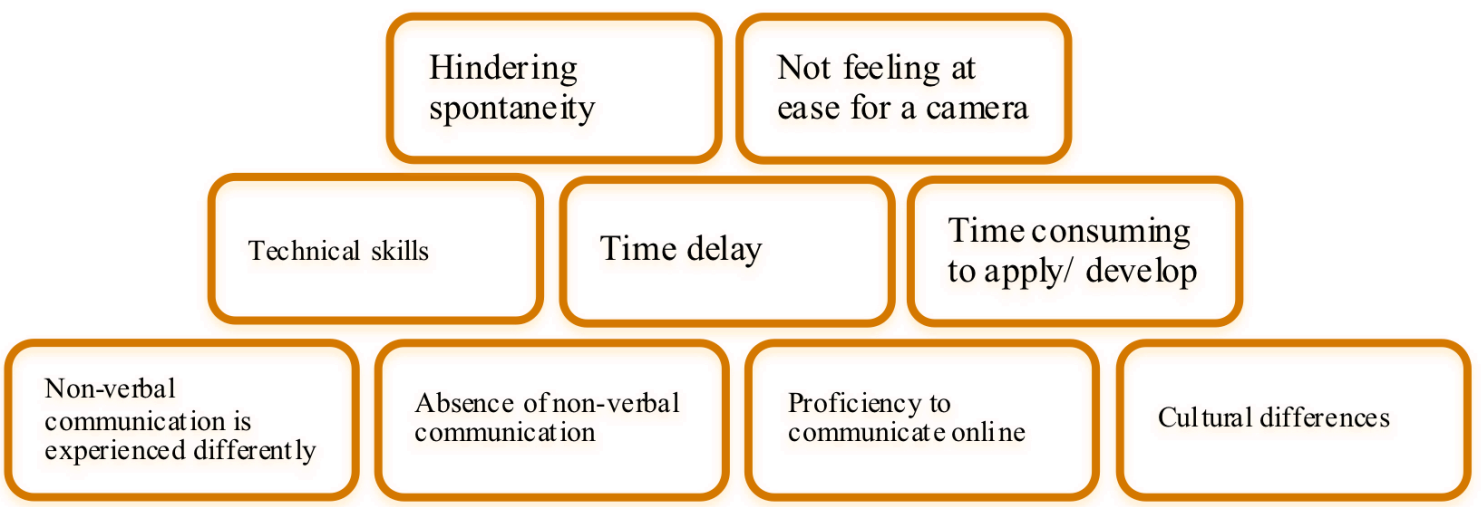

Figure 5. Difficulties to create a playful online learning environment

What strategies might you use for having an online environment where there is variety, surprise and positive energy during the Heightening Anticipation stage?

- ✓ Choose technology that is not too complex and very intuitive.
- ✓ Design content by using multiple technological features, like whiteboard, polls, chat, screen sharing, video, audio, breakout rooms and discussion board.

What strategies might you use for having an online environment where there is variety, surprise and positive energy during the Deepening Expectations stage?

- ✓ Create a 3D virtual place in which learners practice more naturally, use different senses, might want to modify the environment to their personal preferences and in which they are able to position themselves in several ways and look at things from different angles.

What strategies might you use for having an online environment where there is variety, surprise and positive energy during the Extending the Learning stage?

- ✓ Reach out to the learner at an unexpected moment and in a surprising manner.

Figure 6. Some examples of strategies for the climate dimension Dynamism/ Liveliness

Finalizing the Product

In the last phase of my Master's project I finalized the project. In this phase the product was reviewed by my advisor and by two of my colleagues, both teaching creativity and familiar with TIM. I decided not to invite a creativity teacher unfamiliar with TIM for a review of the product, because while I was working on it and explained to others what I was developing, it seemed rather complex for those skilled in TIM and Ekvall's dimensions. For the review I asked my colleagues to focus on three questions: 1. Is the product comprehensible for someone who is not skilled in the field of online learning?; 2. Does the product add value for someone who wants to teach creativity creatively online?; and 3. Which strategies would you like to be described more in detail?

The reviewers thought the product was comprehensible for those not skilled in online

training and for those who want to teach creatively online. The combination of descriptions in words and in visuals makes the product very accessible. All the reviewers, including myself, evaluated the product as work in progress. This gave me valuable information for my next steps as described in section six.

SECTION FIVE: KEY LEARNINGS

In 2013 Branko Broekman, director of ICSC's Master program in Europe, Anneke Veenendaal, current Master's student in Buffalo, and I had a conversation about the content of this program. At that time Branko had pursued the program and Anneke and I were planning to apply. We summarized the talk by describing three pillars: understanding, experimenting and adopting creativity. Understanding refers to the treasure of knowledge you will discover when studying creativity. Experimenting refers to the route of trail and learn if you want to succeed. Experimenting also has to do with personal development. Adopting refers to embracing what you have learned and transfer the learning into concrete, applicable results. I have used this trichotomy to highlight my key learnings in this project.

Understanding

I liked the way in which I enhanced my knowledge about online learning environments. The mix of reading, interviewing and practicing gave me more information than reading alone. I will never forget the feeling that I had when I joined the webinar. It felt very uncomfortable not knowing if other people were online and not knowing if I was listening to a recorded session or a person speaking live. I immediately knew this was not the way to go when you are aiming to have a creative environment. The mix of reading, interviewing and practicing is also a good example of 'practice what you preach', because in my training sessions I want to offer a variety of ways to approach the content. Experiencing myself that it is working effectively strengthens me in future situations.

One of the insights I got about online learning was the similarity there is between teaching creativity and teaching online. For example, teaching creativity is highly interactive

and dynamic and teaching online requires high interactivity, especially when teaching synchronously online. Teaching creativity gives the learner autonomy and freedom, which requires a level of self-directedness. A sufficient level of self-directedness is also needed for effective online learning. This similarity might be of advantage for those who teach creativity and want to teach online. It might also be a pitfall by clinging to what is known and overlooking the differences. I hope my final product will help people to go beyond what they already know or use.

I got a deeper understanding of Ekvall's climate dimensions. I remembered from another course in my Master's program that I found it hard to distinguish the dimensions as they all influence each other. By working with the dimensions in detail and by thinking of what difficulty and strategy fitted a dimension, I increased my knowledge and expertise. I will apply this in my work to facilitate others when they want to improve the creative climate in their organization.

I learned a lot reading about Dr. Paul Torrance's work. I was familiar with the TTCT, the creative skills and the Incubation Model, but getting to know more about the background of this work and being able to put it in a broader perspective extended my learning. His model, in which Torrance described creative behavior as the intersection of the elements ability, skill and motivation, adds another perspective to my tool kit in teaching others to think creatively. I think highly of the way Torrance described the changes that were needed in education and of the skills he identified that should be taught. Nowadays a lot of these skills are named 21st century skills and considered very important.

Experimenting

One of my key learnings was the importance of trail and learn. More than once I changed the features of my product in order to create a product that would meet its purpose. I am proud that I had the courage to stop and change the path of my journey, despite of the effort I had put in it and despite of the time pressure it would create. In my professional life I have seen it happen quite often that people realized they were not heading to a successful result, but did not dare to stop and change, because of the consequences for the project and, even stronger, because of the impression of failure. "Success is not final, failure is not fatal: it is the courage to continue that counts" Winston Churchill said (www.azquotes.com). Failure is inextricably linked with success. And yet, I am raised in an environment where mistakes were counted. Still I experience in our society a focus on what went wrong and little attention for what we might learn from mistakes. I recently heard Dr. Marieke Roskes talking about her research on awarding (presentation Creativity Conference, Radboud University Nijmegen, the Netherlands, October 23, 2017). She found that people are more willing to take risks, if they are awarded for their achievement instead of being awarded for not making mistakes. As risk-taking is one of the dimensions for a creative climate it is important how we approach mistakes and failure.

Reflecting on my experience in this project I relearned that it is necessary to try or test something before the product is fully developed in detail. If I had not got the crucial feed back from my advisor after completing one row of the table, I wonder if I had been able to make the changes based on my own insights. I did feel the dissatisfaction, but did not take enough time to reflect on what caused this feeling. To me, it underlines the importance of time for reflection and incubation. It also underlines the importance of taking small steps and evaluating them. I did not wait to show my product when it was finished and polished, which is not always easy

because of my high quality standards. I experienced again, that these standards will be better achieved, if you try and learn.

In terms of personal development the project strengthened me to trust the process. This required a tolerance for ambiguity, an affective skill defined as one of the big three by Puccio, Mance and Murdock (2011). I believe it is important to practice a lot with dealing with uncertainty, since people naturally tend to go for a quick option in their need for clarity. A rapidly changing world might increase the feeling.

Adopting

This project was a great opportunity to deepen and apply some subjects of what I had learned during this Master's program. By describing the challenges for an online creative climate I had to highlight the essence, identify the problem and come up with strategies to overcome this problem. By elaborating on some of the strategies they became more vivid. This was really bridging between theory and practice, although the ultimate practice step will have to wait until the completion of my degree.

Evaluating the product that I created, I cannot fully embrace it in its current version. The way in which I described the strategies, an approach with difficulties as a starting point, might have caused less attention for the strengths of using technology. Miller (2014) listed some key ways in how technology might strengthen learning and teaching efforts:

> Technology enables frequent, low-stakes testing, an activity that powerfully promotes memory for material.
>
> Technology encourages better spacing of study over the time course of the class and helps prevent cramming.

> Technology facilitates presentation of material in ways that take advantage of learners' existing knowledge about a topic.
>
> Technology facilitates presentation of material via multiple sensory modalities, which, if done in the right ways, can promote comprehension and memory.
>
> Technology offers new methods for capturing and holding students' attention, which is a necessary precursor for memory.
>
> Technology supports frequent, varied practice that is a necessary precursor to the development of expertise.
>
> Technology offers new avenues to connect students socially and fire them up emotionally.
>
> Technology allows us to borrow form the techniques of gaming to promote practice, engagement, and motivation. (p.xii)

I think this list shows there is an essential point of view missing in my product now. I believe it is important for adopting a new product that strengths are fully utilized. Only when an online environment is judged on both, strengths and weaknesses, it will be possible to embrace it as an effective learning environment. I have first focused on the difficulties and on strategies for overcoming these difficulties. This was a good approach for the time there was left for developing the product. I knew the product needed more iterations and I now have developed a product that can be used. If I had chosen to describe the difficulties and opportunities first, I would not have enough time to give strategies. My learning here is to think of all the consequences of a change of plan and adapt the approach, product and plan accordingly. A visual might help to keep the overview and to remind yourself of the goals you are aiming at. Evaluating the current product, I also relearned the value of problem finding: what is the real

problem and who owns the problem. I defined the audience for my product as creativity professionals who want to teach creatively online. To apply the product, this targeting audience is too broad defined. Different levels of experience in applying TIM and in teaching creativity affect the value of the formulated strategies. It also influences how the user will judge which strategy should be described more in detail. In the given timeframe it was not possible to elaborate all the strategies.

SECTION SIX: CONCLUSION

Further development of the product

When I started this project, I already knew it would not bring me to the final destination of my journey. My Master's project would be phase one of a bigger project leading to the implementation of several training programs delivered in a mix of online asynchronous, online synchronous and face-to-face learning. I envisioned a product that I could use for practicing after I had finished my Master's project. Being at the end of the project, I conclude that the product also needs further development. This can be done parallel to practicing using the product in its current version.

A next step in further development of the product is to list strategies after answering the question what the opportunities are to support a climate dimension in an online learning environment. For example, I want to describe what the opportunities are to provide challenge in an online learning environment and use this as a new starting point to think of more strategies. This step is based on one of my key learnings described in section five.

Another step is to discuss the product with an online teaching expert. Due to time restrictions I was not able to do this in the project. Another reason for having planned this after the project is my wish to discuss also a design of a training session with this expert.

The product will also be further developed by creating several viewpoints for different levels of teaching experience using TIM. And it will be deepened by looking at what I can learn from gamification, flipped classroom and such.

After finishing these steps I will make the product more visible attractive and applicable. The table was a good way to organize the strategies while developing the product, but the space in the table is too small to present the strategies.

Next steps to become an online teacher in creativity

Developing a product was a means to reach my goal in becoming a professional online trainer in creativity. Besides improving the product for an online creative learning environment, I need to practice a lot. Taking my learnings into account this will be in small steps, using the feedback of fellow trainers and learners and giving me time to adjust and improve.

I will select a few platforms for practicing. The selection will be based on what is seen as representative for the use of online learning. Gartner, a leading research and consultancy company in ICT, publishes annual information about the market of these products. These reports about the market of educational and collaborative software will be a good guide for me to select the platforms for practicing.

I will design a short session, discuss the lesson with an online expert and practice with it. After I have taken a small step in really teaching creativity creatively online, I will expand the amount of sessions and the use of different platforms.

I look forward continuing my journey!

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Appendix A: Explanation of Concepts

Asynchronous online learning

Learning in which interaction between teachers and students occurs intermittently with a time delay. Asynchronous learning allows learners to go through a course at their own pace and on their own schedule.

Blended learning

Blended learning is an instructional design approach that combines face-to-face training with online learning activities. For instance, the learners may be asked to complete an online scenario or watch an online training video before coming to class.

Computer-Assisted Instruction

Computer-Assisted Instruction (CAI) means a computer is used as a medium for instruction and practice. All types of software may be used for this purpose. General ones like presentation software, or more specific ones like idea generation software. CAI does not necessarily mean online learning. The learning may take place in a face-to-face environment with the use of a computer and digital tools.

Digital Tools

Digital tools refer to any kind of software that is used for instructional purposes in a training session or class. For example, a digital tool might be an e-mailing program, or presentation software to develop and show slides, or a cloud service for document storage.

E-learning

E-learning (short for electronic learning) is an umbrella term that refers to all types of training, education and instruction that occurs on a digital medium, like a computer or mobile

phone. The learning is often Internet-enabled learning and encompasses training, just-in-time information, and communication.

Flipped classroom

Flipped classroom is an instructional design approach that involves self-guided activities and E-learning assessments that are then reinforced in the face-to-face classroom. For example, the learner would complete an online module, then meet with their peers in person to address their questions and concerns. Unlike blended learning, most, if not all, of the training activities in flipped classrooms are done online and face-to-face instruction gives them a chance to elaborate and fully explore the topics.

Learning Management System

A Learning Management System (LMS) is software that supports E-learning. It is usually a platform with multiple functionalities that allow professionals to create, organize, update, and deliver E-learning courses. Most Learning Management Systems also have advanced tracking and reporting capabilities, which enables you to track online learner's progress and identify the strengths and weaknesses of your eLearning course. There is a variety of LMS platforms; examples are given in Appendix B.

Massive Open Online Course

Massive Open Online Course (MOOC) is an online course aimed at reaching an unlimited number of geographically dispersed participants. The course is accessible via the Internet, usually for free.

Online learning

The term online learning is often used synonymously with E-learning. It is an umbrella term that includes any type of learning done on a computer and usually over the Internet.

Synchronous online learning

Learning in which the interaction between teachers and students happens in a live real-time, online event. All participants are logged on at the same time, but in different locations, and communicate directly with each other.

Virtual classroom

A virtual classroom refers to a digital classroom environment that takes place over the Internet rather than in a physical classroom. It is implemented through software that allows an instructor and students to interact. There are 2D and 3D virtual classrooms, the latter using avatars. The interaction in a 3D virtual environment feels more intimate than in a 2D virtual environment.

Webinar

A webinar is a learning event in which the teacher and learners view the same screen at the same time. Usually the webinar has an audio component that the teacher controls and functionality that allows learners to chat by entering text, answering polls, raising their hands and asking questions. There is little interaction between teachers and learners and sometimes part of a webinar (or the whole event) is recorded previously.

Sources: http://theelearningcoach.com/resources/online-learning-glossary-of-terms/, https://elearningindustry.com/start-elearning-10-basic-elearning-terms-know and https://sites.google.com/site/instructionaldesignandtraining/e-learning/e-learning-vocabulary.

Appendix B: Examples of Software

Adobe Captivate

Adobe Captivate is a Learning Management System. In combination with Adobe Connect it offers features for asynchronous and synchronous teaching and learning opportunities (http://www.adobe.com/nl/products/captivateprime.html).

Blackboard

Blackboard delivers Learning Management System solutions that have many users in higher education (www.blackboard.com). Although Blackboard offers the opportunity for synchronous collaboration, the software is more often used for asynchronous online learning.

Canvas

Canvas is a Learning Management System for higher education (www.canvaslms.com). Like Blackboard, Canvas offers features to organize and deliver asynchronous online teaching and learning opportunities.

Cisco WebEx

Together with Microsoft (Skype) and Zoom, Cisco is one of the market leaders for meeting software (Preset, A.; Fasciani, M.; & Eagle, T., 2017, Magic Quadrant for Meeting Solutions; pdf retrieved from www.gartner.com). Cisco WebEx Training is an online training solution that can be used for synchronous online training and offers break-out rooms, a whiteboard, multimedia sharing and video conferencing (www.webex.com).

Moodle

Moodle is an open source Learning Management System for developing and managing online courses. (www.moodle.com). The Moodle solution offers all kinds of plugins and in this way it is also possible to collaborate online.

Skype

Skype is a Microsoft meeting solutions that is well-known for video-conferencing. The software offers collaboration options by a chat box and sharing screens.

Stormz

Stormz is collaboration software that can be used synchronously online and as a digital tool in a face to face environment. The software offers multiple templates with techniques for creative problem solving and facilitating interactive sessions. When you are a trained Stormz user you can define your own templates. When working offline the Stormz team takes care of all the network facilities for an optimal technical performance of your session (www.stormz.co).

Zoom

According to Gartner (Preset, A.; Fasciani, M.; & Eagle, T., 2017, Magic Quadrant for Meeting Solutions; pdf retrieved from www.gartner.com) Zoom is a leader in meeting software. Zoom offers a video and audio conferencing solutions in which it is possible to schedule and record meetings. Functions as screen sharing and white boarding are available (www.zoom.us).

Appendix C: Interviews

The following questions were used for the interviews with Dr. John Cabra (October 4, 2017) and Dr. Cyndi Burnett (October 5, 2017). Due to the organic nature of the conversations not all the questions have been treated equally extensively. The questions about Stormz in the interview with John Cabra have been cancelled, as I was informed wrong about his experience with the Stormz software.

Questions for the interview with Dr. John Cabra

1. From several literature sources I understood that you have delivered creative classes with the use of Second Life, OpenQway and Qube, all 3D virtual worlds. In general, what worked well using these platforms?
2. In what ways supported the use of the technology achievement of the learning goals? In what ways enhanced the technology the learning results? What are the strengths of using these virtual platform compared to teaching creativity in a real life situation?
3. What would you do different next time? What changes would you recommend?
4. What further research is needed to make teaching creativity online a success and a more common way of delivering creative classes?
5. Which preconditions must be met, when you are going to teach in a 3D virtual world in the future?
6. In a 3D virtual world the look and feel of the space and the use of avatars are characteristic. This is in contrast to popular collaboration or training platforms like WebEx. What are your thoughts about space and avatars?
7. You have also used Stormz to deliver creative classes. Could you tell a bit more about context, learning objectives and participants?
8. Did you design and configure the session yourself? Did you use the standard templates?
9. What were the positives of using Stormz?
10. What were the drawbacks of using Stormz?
11. What would you do differently in a Stormz session next time?
12. What length of one session in a synchronous online environment do you recommend and why?
13. In general, what are your experiences with Blackboard (positives and disadvantages)?

14. How would your ideal course look like, if you had to combine online asynchronous and synchronous platforms?
15. Have you ever used other (a)synchronous online platforms, than the ones already mentioned?

Questions for the interview with Dr. Cyndi Burnett

1. What were the learning objectives for the MOOC?
2. What was the target group for the MOOC?
3. Which subjects were part of the MOOC?
4. Can you tell something about the designing process of the MOOC?
5. Can you tell something about realization and implementation of the MOOC?
6. What worked well?
7. What would you do different next time? What changes would you recommend?
8. In what ways enhanced the technology the learning results?
9. How many people did apply for the MOOC? What was the completion rate of the MOOC you've offered?
10. In general, what are your experiences with Blackboard (positives and disadvantages)?
11. How would your ideal course look like, if you had to combine online asynchronous and synchronous platforms?
12. Have you ever used other (a)synchronous online platforms, than the ones already mentioned?

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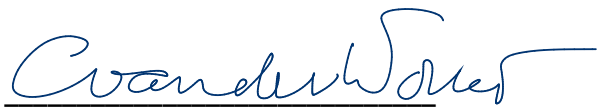
I hereby grant permission to the International Center for Studies in Creativity at Buffalo State college permission to place a digital copy of this master's Project 'Exploring Strategies for Teaching Creatively Online' as an online resource.



Conny van der Wouw

December 15, 2017

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Date