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A New Model for Creative Education

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Advisor

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A New Model for Creative Education

by

Carolina Schnapp R.

An Abstract of a Project

in

Creative Studies

Submitted in Partial Fulfillment

of the Requirements

for the Degree of

Master of Science

May 2018

Buffalo State

State University of New York

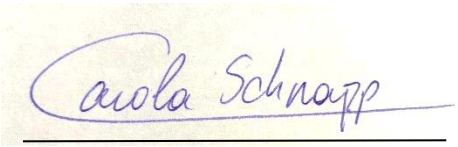
Department of Creative Studies

Abstract

A New Model for Creative Education

This project explored the design of a pedagogical model for the development of creativity, targeted for teachers and educational institutions. The development of creativity has become highly relevant over the past few decades, especially with the emphasis given to 21st Century Skills and the responsibility that schools have on fostering these skills. In this project, you will find the ideas based on research and experience, that were the foundation for the model, the creative process behind the design of the model, and the final version. The project was shared with experts who validated parts of the model and opened space for further development. The final version of this model is of great value for educators' professional development and further research in the development of creativity in education.

Keywords: Creative development, creative metacognition, creative education,



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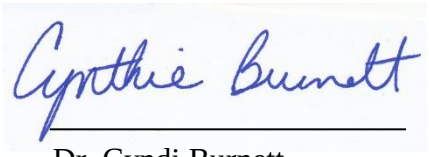
May 14th, 2018 

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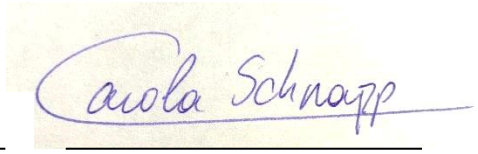
May 14th, 2018 

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Master's Candidate

Acknowledgement

This project is the culminating experience of a three-year journey into creativity and education, but it just the the beginning of a life of pursuing those passions. I would like to dedicate this project to all creative educators who believe in creativity and its potential for developing better communities and societies and happier human beings.

I would like to thank the people that guided me through this process, all the amazing faculty members at the International Center for Studies in Creativity, who offer not only their knowledge, but their kind words of wisdom and experience when most needed. Special thanks to Dr. Cyndi Burnett for closing your laptop and talking with me at CPSI, and Dr. Susan Keller-Mathers for guiding me when I first landed in Buffalo; both of you have been an inspiration for me as a creative educator.

A big thank you to all my fellow classmates, home based and distance cohorts, who were generous with knowledge and experience at all times. You offered encouragement, laughter, guidance, and support, and will always be a fundamental part of this experience.

Finally, I would like to thank my family for their tremendous support, especially my husband Roberto who has been my biggest fan and supporter through it all, never letting me doubt myself and encouraging me to become a better person every day. And my parents who have supported me, loved me, and pushed me to become the person I am now.

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Purpose

The purpose of this Master's project is to design a pedagogical model for the development of creativity that will allow institutions, teachers, and learners to nurture and foster creativity. This model will be based on scientific and empirical evidence and will highlight the most essential and key elements to foster creativity. By highlighting the essentials for developing creativity, this model aims to be simple and easy to follow, offering space for growth and deepening learning experiences.

Description

What is the best way to foster, develop, and nurture creativity? Why should we do it? If we develop creativity skills, are we leaving other skills behind? My aim is to build common conceptual ground for creativity, so administrators and teachers understand what creativity is and why is it important. This will create a better foundation for creative development and will make said development more significant, while promoting the understanding that creativity is essential for human development and social evolution.

I believe that creativity is the missing link in education. It seems that, for the past decades, educational systems have been looking for the best program, best methodologies, best curriculum for developing individuals, and though it is true that one size does not fit all, I believe that by teaching for creativity, educational systems are on the best path to developing the finest individuals a society and community could aim for.

Background

In March 2018, I started working in an educational consulting company, where my primary role is to design a creative curriculum. What is very exciting is that I do not have

constraints in relation to my views about creativity, so I have the freedom to express my true perspective related to creativity and education. The product of this Master's project will be the core of the creative curriculum I will develop in this new position. I believe a pedagogic model for creative development is the first step toward transmitting and communicating my beliefs and ideas about creativity and education.

Goals

1. Create a model for developing creativity that will be useful for different educational contexts.
2. Start building my own expert identity by defining clear views and perspectives related to creative education and the development of creativity, using this model as a starting point for my beliefs.
3. Become a key agent in the shift towards a creative education in Chile and Latin America by building my expertise in creativity and education, and pedagogical innovation.
4. Deepen my knowledge and grow my bank of references in relation to creativity, education, pedagogy, innovation, change, and leadership.

Rationale for Selection

Even though I am passionate about creativity and education now, it was not always the case. As a child, I used to write stories and poems, and I was highly productive creating written output and enjoying other creative outlets. I was excited about learning; I still remember sitting in our family room tracing the human brain out from our encyclopedia. I was fascinated by the brain and the power it has over us, and I believe I still am. As time passed, school became less fun and I felt less passionate about learning; I started to feel numb. It was not torture, but it was

not fun or exciting either. I think this state of mind got in the way of finding my true passions in life at the time. After Art School, Culinary School, and a few years in the job market, I discovered how passionate I was about education and being able to have a positive impact on someone's life. While studying education, and later as an educator, I began to recognize the power that creative development has on people, and how relevant creative development is to finding your true passion in life.

Being deliberate about developing creativity has plenty of benefits that serve a diverse array of goals. First, research has shown that deliberate creativity has a direct impact and is highly related to cognition (Runco & Chand, 1995; Ward, Smith, & Finke,1999). Second, creativity has a direct impact on intrinsic motivation and finding one's passion (Amabile, 1997; Goldsmith & Matherly, 1988; Kiomarsi & Rezaeyan, 2014), which can lead to building learning communities driven by intrinsic motivation. Third, there are plenty of areas impacted by creativity: empathy, self-esteem, well-being, and emotional learning (Goldsmith & Matherly, 1988; Kiomarsi & Rezaeyan, 2014). As you can see, nurturing creativity is not a self-serving process, it is transversal and helps achieve diverse educational goals.

A model for the development of creativity is the starting point for a conceptual common ground. Education agents are expected to nurture creativity based on social and business standards, and some countries even frame creativity as a key skill for educators to focus on developing (Vincent-Lancrin, 2013), but existing information is not always accurate or accessible to them. Misconceptions about creativity and what it should look like often end up confusing the creativity advocates. This model will offer a clear and understandable starting point for developing creativity in different educational contexts.

SECTION TWO: PERTINENT LITERATURE

Introduction

When I started this project, I had many topics and ideas running through my mind. I was reading and accessing sources from different areas related to creativity and education. Although this was helpful, because I was gaining significant insights, it was not helping me focus on reaching my own perspective. Being a teacher for five years and being a part of the Master's Program in Creative Studies for a year provided me with a foundation of my own beliefs about creativity and education, so I decided to focus my reading efforts towards these ideas. These are my big theory areas: *Personal Creativity*: creativity that happens at an intrapersonal level; *Creativity Continuum*: the path of creativity in an individual and how should this path be fostered; *Creative Environment*: the best space and situations for the nurture of creativity; *Social Creativity*: the impact of social relations in creativity; and finally existing models in creativity and education and for the development of creativity: shedding light on "the how" of developing creativity and providing some order to the creative development process.

Even though these topics still appear as being vast and full of information, for me this was a breakthrough because I was not just narrowing my focus, I was also reading with a focus, and my reading was much more purposeful. The following sources annotated below are the most significant ones that offered the most insights and novelty in my thinking, plus some seminal work that is the building ground for my model.

Beghetto, R. A. (2007). Ideational code-switching: Walking the talk about supporting student creativity in the classroom. *Roeper Review*, *29*(4), 265-270.

The concept of an ideational code-switching is similar to linguistics: when you are proficient in more than one dialect, you accommodate what you say so that the receptor

understands you better. This article described the important role that a teacher might have by bridging between a student's mini-c (personal) and little-c (everyday) creativity: helping the learner make the switch from something that is only meaningful to him to making it meaningful and relevant to the learning context; making that intrapersonally novel and useful idea or concept, novel and useful at an interpersonal level as well. I find this interesting for the background of my model because of the impact of the teacher's role on the learner. If a teacher is aware of how she might guide the student to make an ideational code switch, that teacher is also helping build the student's creative metacognition. Instead of dismissing novel ideas because they seem unrelated to the topic at hand, the teacher can help that student build a better understanding of his own creative process.

Beghetto, R. A., & Kaufman, J. C. (2007). Toward a broader conception of creativity: A case for "mini-c" creativity. *Psychology of Aesthetics, Creativity, and the Arts, 1*(2), 73-79.

Runco, M. A. (2003). Education for creative potential. *Scandinavian Journal of Educational Research, 47*(3), 317-324. doi: 10.1080/00313830308598

These two articles introduced a very important concept for my idea of creativity of creativity at a intrapersonal level: those creative processes that happen at an internal level and are not necessarily shared. For Runco (2003), cognition is a creative act, so the process of learning becomes a creative act, and whatever an individual learns is novel and useful for that specific individual; it has value for that person. Kaufman and Beghetto's (2013) "mini-c" creativity sets the ground for a creative continuum and for the importance of "creative metacognition." Both theory paths are highly relevant to my beliefs about creative development and have a tight connection to the constructivist approach of learning.

Brown, S. (2009). *Play: How it shapes the brain, opens the imagination, and invigorates the soul*. New York, NY: Penguin Group.

As I started this project, I also started teaching a class for a design and innovation Master's program about creativity skills. The previous instructor had a strong focus on play and how it impacts creative behavior. We met once while I was planning the course and he suggested this book. What I have discovered while reading this book is how a playful attitude favors creative thinking. Some of the main ideas of this book are around the judgement free zone that exists around play: when we play, we are less judged and we judge less, and we are more honest as well. This has brought me to understand that play is going to have an important role in my model and might be an important catalyst for creative development. After all, play is how we start to interact with the world and learn from it. Play is experimentation.

Burnett, C., & Smith, S. (2018). *Reaching for the star: A model for integrating creativity in education.* Manuscript submitted for publication.

This chapter submitted for publication offers an approach on to how to integrate creativity into education. It presents a model that has a star shape, and each point of the star stands for a different aspect of creativity integration in education. Important parts of this model support my core beliefs about developing creativity. It states the importance of understanding creativity and having a clear, conceptual understanding before attempting to develop and nurture it in others. Drawing from diverse sources, this model shows an important aspect on creative self-awareness, and the impact that has on helping others develop and foster creativity. It is important to develop a creative consciousness. I believe that creativity is highly contagious, and if you enjoy a creative way of life, and if you model it, you will develop creativity not only deliberately but also unintentionally. The other aspect this source touches on is how important

environments are, not only physical environments but also the learning climate. This source provided me with a current view of creativity and relates highly to my project.

Cremin, T., Burnard, P., & Craft, A. (2006). Pedagogy and possibility thinking in the early years. *Thinking Skills and Creativity, 1*(2), 108-119.

The article suggests that possibility thinking might be the core of creative learning since it includes the processes of problem finding and problem solving. The models presented in this article represents a pedagogy for possibility thinking and offers an important overlap between teacher and learner. Practices suggested for possibility thinking pedagogy are the same ones suggested for learner and teacher. Another connotation of this overlap is the idea that, from time to time, the teacher needs to become the learner and the learner needs to become the teacher; there needs to be a dynamic balance between these two main roles present in the learning process.

Puccio, G. J., Cabra, J. F., & Schwagler, N. (2018). *Organizational creativity: A practical guide for innovators & entrepreneurs.* Thousand Oaks, CA: SAGE Publications, Inc.

This book has a secret hidden behind its name; it is called ‘organizational creativity’ but really, it constantly refers to personal creativity and how you might develop it. At some point it even points out that the level of creativity of an organization depends on the level of creativity of its individuals, which makes a lot of sense to me since the individuals are the ones who build the climate of the organization. This book offers different valuable aspects: it gives exercises and ideas to develop your own creativity based on different topics discussed in the chapters and offers new models to approach creativity and opens the spectrum beyond CPS (i.e., Design Thinking mashup and Trycycle™). But what has been most valuable for me is how the book is organized: *know, do, be.* Developing creativity is about becoming creative, breathing creativity,

and what this approach does is to provide a framework to understand this process. First, we need to know about creativity, so we learn; then we need to do creativity, so we practice it consciously; finally, we are creative, and it comes out naturally when we are not constantly thinking about it. This framework has been very interesting to consider while conceptualizing my model.

Sawyer, R. K. (2010). Learning for creativity. In R. A. Beghetto & J. C. Kaufman (Eds.), *Nurturing creativity in the classroom* (pp. 172-190). New York, NY: Cambridge University Press.

In this chapter, Sawyer referred to the instructional model existing in most school systems. This model is referred to as *instructionism*, and it describes a method where the sole purpose of a classroom is instruction. He reflects into how the learning sciences are influencing this perception so that the classroom objectives shift from being purely instruction to being exploratory, inquisitive, and experimental, which will lead to a creativity-infused curriculum. Therefore, the arts will not be the only space where students experience and develop their creativity. Current and future learners are in need of a creativity edge if they are to survive in the 21st century.

The author then presented his ideas in relation to the social aspect of creativity, most importantly collaboration and how this is portrayed during improvisations, which he coins as emergent (unexpected) creativity. Another interesting idea he offers is the *Action Theory* of creativity that argues that creativity happens in action, by doing. This might contrast with the *Intrapersonal Creativity Perspective* (Beghetto & Kaufman 2007; Runco 2003), but I see them as a complement. *Action Theory* cannot happen without *intrapersonal creativity*, and *intrapersonal creativity* nurtures the *Action Theory*. Finally, Sawyer suggests that we view

classroom interactions as a space for improvisational interactions which will allow for more significant creative learning.

Soh, K. (2017). Fostering student creativity through teacher behaviors. *Thinking Skills and Creativity*, *23*, 58-66.

This article addresses the "how to" of creativity, identifying three key stages: social modelling, reinforcement, and classroom ecology. The first aspect got me really thinking; as humans we are always learning, and the first method we use to learn is to observe role models, and later peers, and copy their behavior. This was a big insight for me: if we want to develop creativity we need to act creative. If teachers and role models are consistent in this, students will copy this way of being, as we are social beings that copy behaviors. The ecology aligns with my conviction of the importance of the environment: "the ecology of the classroom is in itself creativity-fostering as long as it has the required characteristics" (p. 60). It does not solely depend on the teacher, it is an ecology that is facilitated by the community. Finally, the article provides support for the validity of the Creativity Fostering Teacher Behavior Scale (CFT Index) and includes what is useful information for assessment of creative pedagogy.

Starko, A. J. (2018). *Creativity in the classroom: Schools of curious delight (6th ed.)*. New York, NY: Routledge.

For every educator that is dedicated towards developing creativity, or for every creative professional interested in education, this is an essential go-to book. You read it once, but it is also a source of constant reference when you are developing programs, or revisiting different creativity related experiences. The first time I read part of this book it was the 3rd edition, and now the 6th edition is the most recent version. What is interesting about this edition is that is current to the new approaches to creativity and education, offering a broad spectrum of theories,

models, and points of view. One of the areas of largest interest for me was the update related to neurobiology. For example, the idea that creativity is not just related to the right side of the brain but is a complex whole brain activity. This book has guided me through the whole process, and I have gained from it specific content but also supporting information to compliment what I have discovered in other articles and sources.

It was not possible for me to subdivide these sources into themes and areas, as I believe they all shed some light into some aspects of my theory areas. Many of the sources had connections among them, and I believe this is due mainly to the fact that creativity should be understood as a system, and not just focus on one aspect. One of the most important insights I gained by reviewing these sources is the interconnectedness of the different parts and agents of creativity, and the high impact each part has on the others. A successful model for the development of creativity needs to have a balance of all these key elements: Person (teacher and learner), Environment (physical and climate), Social Interactions, and a Creativity continuum.

In addition to the sources quoted above, there are other sources of information that have influenced my thinking and beliefs about creativity and education. The following sources have added important information for the development of my creative development model:

Burnett, C., & Figliotti, J. (2015). *Weaving creativity into every strand of your curriculum*. Buffalo, NY: Knowinnovation Inc.

Collard, P., & Looney, J. (2014). Nurturing creativity in education. *European Journal of Education*, *49*(3), 348-364.

Craft, A. (2005). *Creativity in schools: Tensions and dilemmas.* New York, NY: Routledge.

Meier, D. (2000). *The accelerated learning handbook: A creative guide to designing and delivering faster, more effective training programs*. USA: McGraw Hill Professional.

Nielsen, D., & Thurber, S. (2016). *The secret of the highly creative thinker: How to make connections others don't*. Amsterdam, The Netherlands: BIS Publishers.

SECTION THREE: PROCESS PLAN

Plan to Achieve Your Goals

When deciding on my Master's project, the idea of a creative curriculum was always in my mind, but I felt it was very difficult to achieve in one semester. If the aim is to build a creative curriculum, first the philosophy behind it must be clear, which is why I decided to start with a model for the development of creativity as my Master's project.

The first step of this project was the literature review. Previously in the Master's program, I conducted a literature review that helped me understand the existing elements within current curriculums that promote creative development. This literature review is a starting point that I complemented with further review into existing ideas about creativity and education and my *Theory Areas* mentioned in the pertinent literature. The first step in designing a model for the development of creativity was understanding what has been done and what is being done and start from there.

The second step was to define and design. Once the complementary literature review was completed, I defined which were the key elements that my model should have; which were the primary elements, and which were the secondary ones. Once this was defined, I needed to design the model I envisioned. The model is a graphic representation of my ideas.

The third step was the iteration process. I needed to gather a group of experts on creativity and education that would be willing to give me feedback on my work, people who would be willing to go back and forth; reviewing my model prototypes and providing feedback on them.

Even though the iteration process is still ongoing, I now have a model for the development of creativity to be tested with teachers and students. This project offers diverse

opportunities; I will be able to test and collect experiences to improve and modify this model, and with feedback and iteration, I believe this model will grow into a more robust framework that will enable a curriculum to develop.

One big opportunity that exists for this project is the creation of a *Creativity Education Lab* in Frutillar, Chile. Frutillar has recently been named Creative City by the UNESCO and the consulting company where I work has been called to be a partner in this initiative. This lab is looking for a model to follow and iterate around to build a network of creative schools, so being able to base this experience in my model is a massive opportunity.

Project Timeline

Date	**Task**	**Amount of time to complete**
Week 1 Feb 5 to Feb 11	● Share concept paper with Cyndi and Danielle (SBP) ● Improve and rewrite concept paper	15 hours
Week 2 Feb 12 to Feb 18	● Turn in Final Concept Paper ● Start complementary Literature review ● Contact experts to gather an iteration group	15 hours
Week 3 Feb 19 to Feb 25	● Literature review ● Define type of model and audience	10 hours

Week 4 Feb 26 to Mar 4	● Zoom meeting ● Literature review	10 hours
Week 5 Mar 5 to Mar 11	● Work on sections 1 to 3 ● Start defining key elements of a model for the development of creativity	7 hours
Week 6 Mar 12 to Mar 18	● First ideas for designing a Model for the development of creativity	17 hours
Week 7 Mar 19 to 25	● Turn in Sections 1 to 3 ● Zoom meeting ● First draft of the model ● Share model with alumni from Master's program and fellow teachers.	10 hours
Week 8 Mar 26 to Apr 1	● Share sections 1 to 3 with editor after Cyndi's feedback. ● Iterate on model based on feedback from alumni and teachers.	7 hours

Week 9 Apr 2 to Apr 8	● Work on sections 4 to 6 ● Share refined model with experts	7 hours
Week 10 Apr 9 to Apr 15	● Share sections 4 to 6 with editor ● Work with the feedback received to improve the model.	10 hours
Week 11 Apr 16 to Apr 22	● Turn in sections 4 to 6 ● Share project with editor for grammar and APA	5 hours
Week 12 Apr 23 to Apr 29	● Get presentation ready for final Zoom meeting ● Finishing touches for sections 1 to 6 based on editor's and Cyndi's feedback. ● Finishing touches to the Model	7 hours
Week 13 Apr 30 to May 6	● Master's project Presentation - Zoom	1 hour
Week 14 May 7 to May 13	● Sign off Zoom presentation	1 hour

Week 15 May 14 to May 20	• Upload project to Creative Commons • Fly to Buffalo for Commencement Ceremony!	1 hour

Total amount of hours: 116

SECTION FOUR: OUTCOMES

Introduction

My goal for this project was to create a model to explain a pedagogical approach for the development of creativity. Since I typically use diagrams to make sense of concepts, I slightly underestimated the process of creating a full model. When faced with mind blocks while creating this project, sticking to the basics of what I learned about Creative Problem Solving (Osborn, 1953) was fundamental in keeping me going, and keeping my level of energy high. It allowed me to achieve my goals, and have results from my process.

The main outcomes of my Master's project include a documentation of the deliberate use of the creative process, and a Pedagogical Model for the Development of Creativity. This is my minimum viable product that will enable me to build on and help teachers to develop creativity for themselves and others.

Deliberate Use of the Creative Process

Deliberately using and experimenting with the creative process was a significant learning outcome of this project. Students of the Creative Studies Master's program learn the guidelines and the baselines for creative thinking. We learn tools to accelerate creative thinking and unleash wild ideas, but we usually do it with pretend problems, or borrowed problems; we do not always have the time and space to delve into the creative process with an important purpose. I have been doing workshops and facilitations where I guide people through the creative process, but until now, I had never gone *all in* on the creative process.

My creative process was inspired by two main frameworks: Creative Problem Solving (Osborn, 1953) and Design Thinking (Razzouk & Shute,2012). I used a combination of these two frameworks, which worked together very well together to help me achieve my purpose.

Clarifying and Understanding the Scope of the Project

When I started this project, I underestimated both the time and the resources that would be required. At first, I wanted to develop a complete creative curriculum, with assessments, planning forms, suggestions for lessons, student and teacher profiles - I was all over the place. Writing my concept paper helped me focus towards a model, but I was still thinking about a model that would allow *anyone* to develop creativity. These high standards were freezing me; I was not able to move forward, which frustrated me very much.

During my readings and reviewing course materials, I went through the model suggested by Robert Fritz (1989), which referred to identifying your current state and your ideal future clearly, as seen in Figure 1. Once you do this, you are able to identify the gaps, which is when creative tension appears. In my case, I was creating too much tension for myself. According to Fritz (1989), when you set an ideal future, but you do not fully understand the gaps in between, the tension generates frustration and you might be tempted to lower your ideal future. What I understood was that I had to bridge one gap at a time and focus on those gaps that were achievable during one semester. The first area I needed to identify was a clear audience.

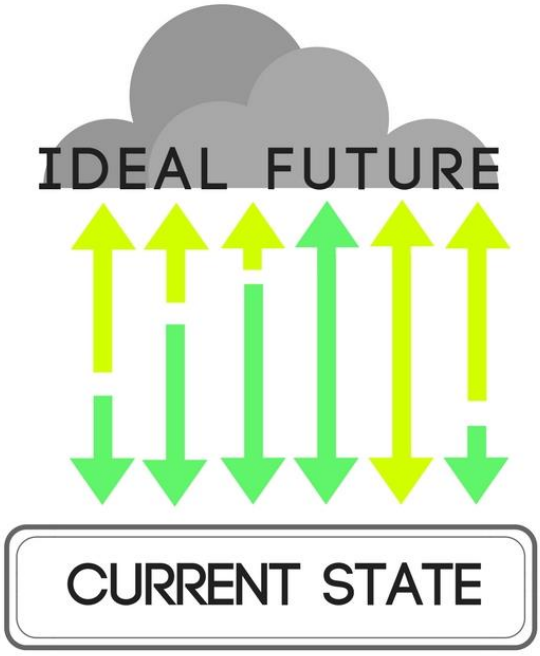

Figure 1. Graphic adaptation from the Fritz's (1989) Model.

Designing a model for anyone who wants to develop creativity was a complex task. A model must serve the context, the abilities, and other characteristics of the actors involved. So, I decided to create a pedagogical model, which was within my spectrum of knowledge and experience, and ultimately motivated me.

Framing my vision with Fritz's (1989) model helped me to clarify my path and future steps. Additionally, it helped me move forward and start ideating for my own model.

Full Divergence

Even though I use diagrams to make sense of ideas and concepts, much of these diagrams were drawn out solely in my mind. My creative process is very internal: I rarely put onto paper the process of what I am thinking. For example, when I must write papers, I start writing them in my mind, and I even cross out sentences and words. Over the last two years, I have learned the importance of taking my ideas and process out of my mind, and into the

tangible (draw it, write it, act it). This leaves space for further development. With that experience in mind, I started writing down all of my ideas, while I was reading and whenever they appeared.

In my living room, I set up two big flip-chart papers and I wrote all my ideas, existing knowledge, beliefs, and insights about creativity and education on Post-its™ (Figure 2). While doing this, I was not only following the divergent thinking guidelines (Miller, Vehar, Firestein, Thurber, & Nielsen, 2001) but also experiencing different creativity skills, such as avoiding premature closure (Murdock & Keller-Mathers, 2008). Though I had some ideas of models already, I decided to allow time for additional ideas and trust the process.

Figure 2. Existing knowledge, beliefs, and insights about creativity and education.

Converge

The next step was to converge: I had all of my ideas and now was time to start selecting and evaluating them. I thought this stage was going to be easier, since I had already been tempted toward premature closure, but this was not the case. My first step in the convergent stage was to cluster and remove those ideas that were repeated. Keeping the convergent guidelines (Miller et al., 2001) in mind, I tried to focus on my objective: designing a pedagogical

model for the development of creativity. I also focused on considering novelty, and including those ideas that came as surprises, such as “Play is to explore, which is the first approach to learning” or refined and improve ideas like “The aim of creative development is creative metacognition.” Patterns started to appear. This process took around 3 days, the final outcome can be observed in Figure 3, with the detail of ideas and clusters available in Appendix A.

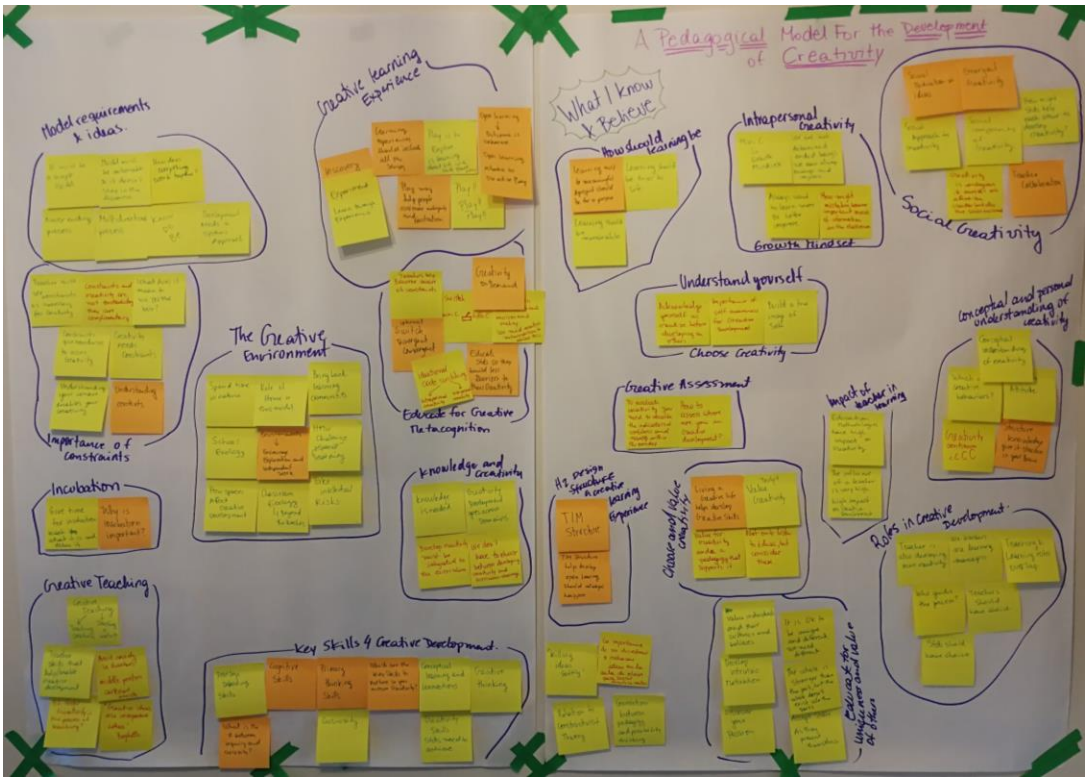

Figure 3. Labeled clusters as a result of the convergent process.

Get Visual

Now was the moment I had been waiting for: designing my model and putting onto paper the ideas that had been running around my mind for weeks. I got my markers ready. I thought I had it clear in my mind, but as soon as I started, nothing came out. The only thing my marker would produce were random lines that had nothing to with a pedagogical model. For inspiration, I thought about my own experience. When I ask my students to do mind maps, I tell

them to just start writing random things, then connect ideas if there is a connection, but the most important thing is to just start. So that is exactly what I did.

Main themes. As I started drawing, different themes started to emerge, and my goal became to somehow connect those themes. The main ideas that appeared were: the learning experience, roles within the process (teacher, student), the outcome of the learning experience, choose and value creativity, accept your own creativity, learn from the experience, incubation, and creative metacognition.

The learning experience is key in the development of creativity, and the two main aspects that I wanted to highlight were; roles during the experience and the outcome of these experiences. First, I believe that roles should overlap during the creative learning experience. At times, the teacher becomes learner and learner becomes teacher, and it should happen organically. Second, what comes out of a creative learning experience is unpredictable. Every participant in the experience will have a different outcome that, when socialized, helps that participant to build a stronger learning and capitalize their knowledge.

Another theme was the importance of giving value and choosing creativity. If you want to develop your creativity but are not really choosing or valuing it, it will be very difficult to have a successful outcome. In hand with this is the idea of accepting your own creativity before aiming to nurture creativity in others. If you do not believe you are creative, again, it will be very difficult to foster creativity in others.

If there is no reflection from an experience, it is just an experience - there is no learning and there is no knowledge (Mezirow, 1990). That's why an important part of developing creativity is to learn from the creative experience all that there is to learn: content, concept, process, value, attitude, behavior, etc.

Finally, *Creative Metacognition* (Kaufman & Beghetto, 2013; Kaufman, Beghetto, & Watson, 2016) was a big insight for me, as was understanding that the aim of creative development is to achieve creative metacognition. If we are aiming to develop something, we must be clear about what should be our ideal outcome. When I started this project, I had, non-defined goal, I was not sure which was the main goal for developing creativity, I believed that the process itself was the goal. Now I understand that creative development goes beyond the process itself. I will elaborate further on Creative Metacognition in my description of the model.

Iterative design process

The iterative design process consists of experimenting and doing so early and often. Create a prototype, review it, receive feedback, and rework your design so it really fulfils its purpose. This iterative design process is also known as rapid prototyping (Interaction Design Foundation, 2018), and this is exactly what I did. I divided my rapid prototyping into two main parts: personal iterations and expert iterations.

Personal iteration. For my personal iterations I established some criteria, not so much to evaluate against, but enough to be sure I was following some guidelines. The criteria were the following:

- Simple: The model is simple and the framework has no more than five key elements.
- Clear: The model is not cluttered with arrows, dotted lines, or other graphic elements.
- Flow and coherence: The model has a flow among the different elements and its ideas are coherent with the development of creativity.

I used these guidelines while drawing and designing, but I made sure they were not limiting my ideas. The guidelines did help. For example, in one of my drawings, the model was becoming too confusing, with too many arrows and different directions. I stopped and thought,

how might I explain this better? This led me to a simpler model (Figure 4). For the whole array of model prototypes, please refer to Appendix B.

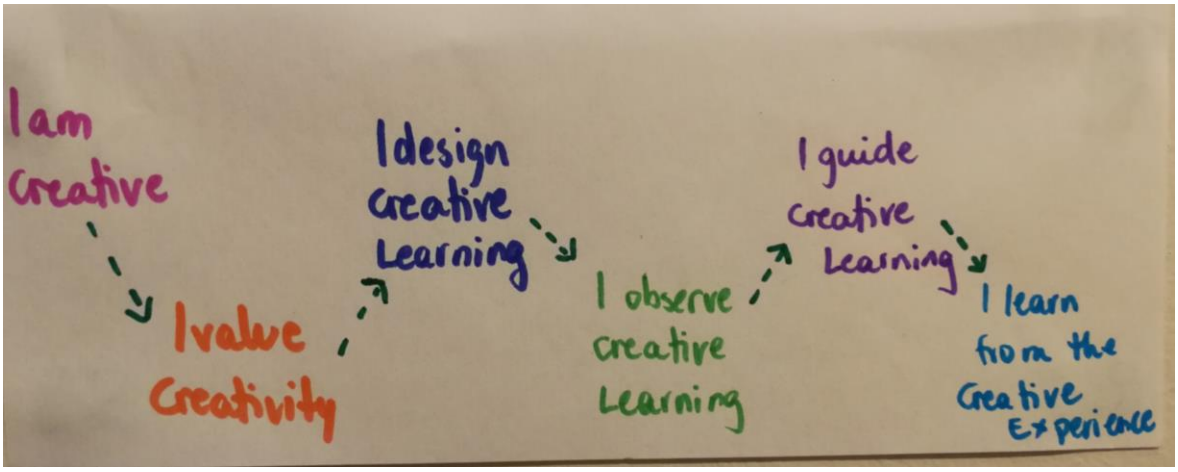

Figure 4. Example of a simple model for the development of creativity.

Get some feedback. Once I had gone through different ideas, I had to go to the experts to receive some feedback. I needed guidance because I felt I had reached some good points, but I was not sure which ideas were more interesting to pursue. The first expert I contacted was Dr. Cyndi Burnett. Her feedback made me aware that one of my models, with a scope of developing creativity in schools, had similarities to Beghetto and Kaufman's (2007) theory of mini-c creativity. While I know there is something in that model to one day pursue, I understand that it needs further maturation. The initial Creativity Continuum Model that was reviewed by Dr. Burnett can be observed in Figure 5. From this conversation I also understood that incubation and creative metacognition were very important, and that the creative learning experience is vital. But given my time constraints around this project, I had to use a high-level approach and not go too deep into these topics.

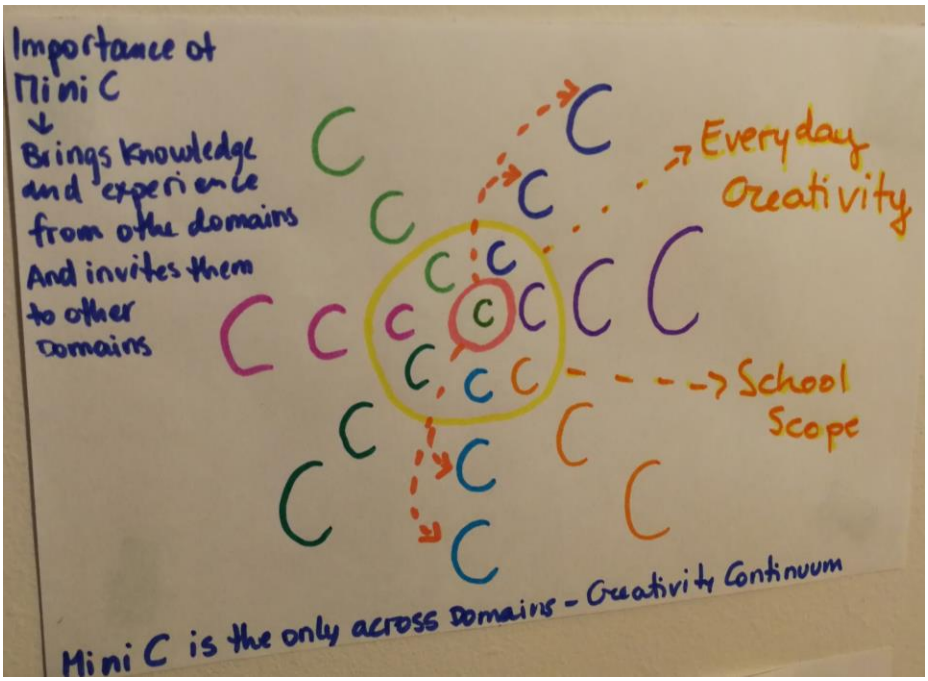

Figure 5. Creativity Continuum Model.

After this conversation, more drawings emerged. During that week I had to travel for work, which was helpful because I stopped staring at my prototypes and Post-its™ for several days. Every day, I thought about what was it that I truly wanted to share. I wrote, I drew, and then came to a model that highlighted and summarized my ideas.

I shared these ideas with family and friends, which was a very interesting experience. They had seen my living room full of drawings and they were the ones who had listened to me for the past weeks, so they had some context. I asked them what they thought. They gave ideas about the flow of the model and it was a great exercise to test for understanding, and for the simplicity of the model. The outcome can be observed in Figure 6.

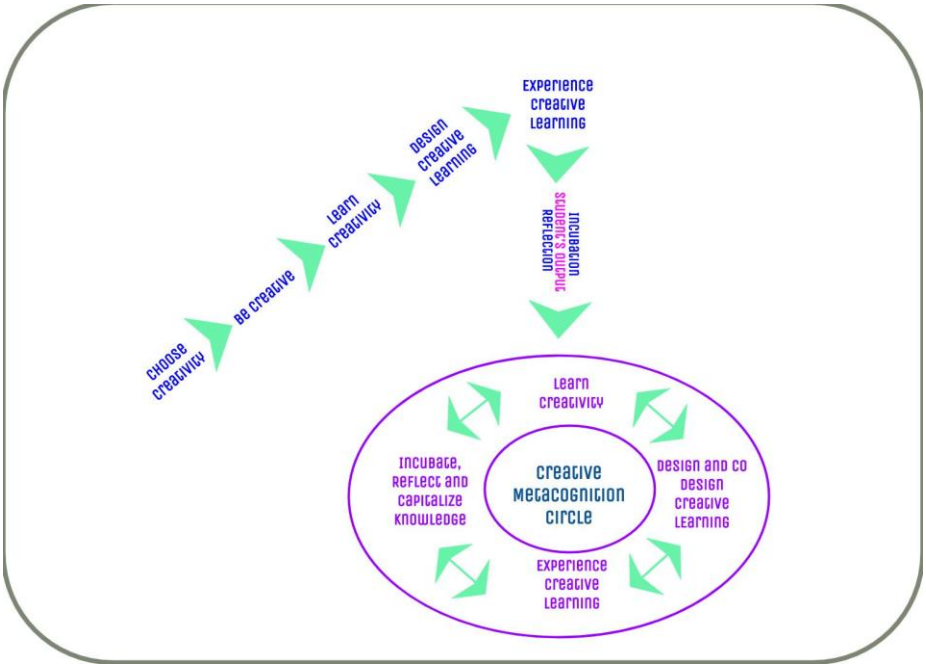

Figure 6. A Pedagogical Model for the Development of Creativity

A Pedagogical Model for the Development of Creativity

The Pedagogical model for the Development of Creativity has three main parts; *First Input, Output of the First Creative Learning Experience*, and the *Creative Metacognition Circle.* My aim was to develop a model that any teacher could use, a broad framework to understand a very complex process. Today you may find plenty of implementable programs available to develop creativity (e.g., Project Based Learning, Design for Change, Genius Hour), but not many of them provide a big picture, a roadmap that might serve as a guideline when at times teachers might feel lost, or that they're delivering program lessons without a true purpose. I am not saying that this model will be the answer to it all, but it might help provide organization and guidelines for the long run of creative development.

First Input

The first input is directed at the teacher, the individual that wants to develop creativity in others. In many cases it might be that this is not just one person, but a group of teachers and

educational practitioners who wish to start nurturing creativity in their students. The main parts of the *First Input* are: choose creativity, be creative, learn creativity, design creative learning, and experience creative learning. It is very important that the teacher accepts that during this process, he will also be a learner, and must therefore be open to accept the experience from a learner's point of view. In other words, accept that your mind and self will be modified in the process.

Choosing creativity, the first stage of First Input, involves you. You are being deliberate about something that has an emotional component, something that is being chosen, not imposed. When you choose something, intrinsic motivation kicks in, and you do things because you want to do them, not because you are told to (Patall, Cooper & Robinson, 2008). Intrinsic motivation is vital in the pursuit of developing creativity. The path of creative development is very organic, and even though I am offering a straight line, you should look at it as a sequence, knowing that it might squiggle and zig-zag and that at times you may dive deep into something and come out disoriented. This uncertainty might cause you as the teacher to want to opt out, but if you choose a path, you will likely be more determined to see it through.

Once you as the teacher have chosen creativity, you need to truly accept that you are a creative being. During workshops and professional development, if you ask people to raise their hands if they are creative, only a few of them will. Before attempting to foster creativity in others, we must acknowledge that we are all creative beings, and we all have the biological structures and social abilities to be creative (Kaufman & Gregoire, 2015). If you do not believe you are creative and have the ability to reach your full creative potential, will you be able to believe your students might be able to do so?

Once it is clear that you (the teacher) chose this path, and that you accept that you are creative, the initial knowledge stage comes: learn creativity. You can learn creativity - by which I mean learning about deliberate creativity - through different media channels. You might attend workshops, read about creative phenomena, talk to experts, read articles, and learn about different creative practices. All of this information will help you build a clearer personal view about creativity, and how you believe you should attempt to develop your own.

The next step is to design your first creative learning experience. What is your desired outcome? How long will it last- just one class or a whole unit? What resources do you need? Do you need help? It is important that you prepare yourself so that you set yourself up for success. This is the first experience, so chances are it will not go according to plan, and many things might fail. But what is important is that you and your students enjoy it, and that you have an ideal outcome in mind so that you can reflect afterwards upon your experience.

The culminating step of the first input is to experience creative learning. Put into practice what you have designed. Come to the creative learning experience prepared, with an open mind and flexibility. If you want to develop the skill of curiosity, there are different tools you might use. Learn about the methods you are planning on using and be flexible to change if they do not work. Have a plan B, just in case.

Output of the First Creative Learning Experience

The *First Input* is all about the teacher and his experience. The output stage features the student. It is very important to take into consideration the students' output from the experience, so be intentional about doing so. You can plan for exit cards, open conversations, journaling, mind maps, and circle discussions, among other things, but you cannot exit your first creative learning experience without knowing how it impacted your students. Therefore, you might ask

them, “How might we move this forward?” “What could we do next week to continue with this experience?” “If you could improve this experience, what would you do differently?” Think about creative development as a partnership. You are not alone in the process, and your students are not alone in the process. From this point forward, you are in this together.

There are three main outputs of the experience: reflection, student’s output, and incubation. By definition, incubation is not something that will happen right away, but if you leave questions hanging they will trigger incubation, so intentionally ask yourself and your students questions.

Creative Metacognition Circle

Now that the partnership between teacher and students has been established, consider expanding the partnership beyond your students, to other teachers, parents, and educational agents of your community. Everyone has something to learn from someone else; we should never underestimate what others might teach us.

Creative metacognition is an understanding of the self and the context; it is gaining knowledge about ourselves and understanding how to balance our attributes and limitations with the environment, in order to become our best creative selves and contribute to the larger creative development (Kaufman & Beghetto, 2013; Kaufman, Beghetto, & Watson, 2016). If we have conscious teachers who are aware of creative potential, they will be better able to guide students - and themselves - toward achieving creative metacognition.

The Creative Metacognition Circle (CMC) is an ongoing process. You will not achieve Creative Meta-Cognition after one experience, and I do not believe we ever achieve full CMC in our lifetime.

The color of the circle is different from that of the previous stages because this is now a social process, where the roles between teacher and student combine and overlap. The stages of the CMC are:

- Learn Creativity: We always have new things to learn about creativity, including content knowledge.
- Design and Co-Design Creative Learning: Design new creative learning experiences by yourself, with students, with other teachers, or with parents.
- Experience Creative Learning: The role of the teacher is very important in helping students achieve CMC. Teachers are mediators of meaning: we need to guide students on when to share ideas, and when some ideas need further maturation before being shared. Help students see that they are being creative, how are they being creative, and how to be part of creative groups.
- Incubate, Reflect, and Capitalize Knowledge: Creative experiences without reflection are just experiences. We need to reflect on and learn from those experiences, so they build the foundation for new experiences, capitalizing the knowledge.

The CMC has an iterative nature: you try and experiment with creative learning experiences, you learn from these experiences, and you try them again, now improved and modified. There is constant interaction between teacher and students, and there is feedback, reflection, and designing of new experiences. What is very important is that this circle has two layers: the intrapersonal and the interpersonal. When reflecting, we learn about ourselves and we learn about others. When we hear or read someone else's reflection, we understand different things and we accommodate meaning in our brains. There is a necessary attitude when using the

multi-directional CMC: it must be embraced with a very open mind and with tremendous flexibility.

Feedback from Other Experts

When I was done with the model (when it was more than just random words and lines), I created an online form (Appendix C) with all of the information necessary to understand the model. I then shared this form with some creativity and education experts to receive their feedback so that I could improve my model and make it clearer and more significant.

When you create something that you have worked hard on, it is reasonable to be very attached to it. I do not remember ever exposing this kind of work to other people, then waiting for their feedback. It was a great experience, and I am going to continue this practice as long as someone is willing to give me feedback. There is something very powerful about sharing projects and leaving them open for feedback. It is like you have a larger brain, and the connections and experiences that others bring to the table are elements that you could never find by yourself, no matter how much you read and experience. Sharing the model has made my ideas much richer and stronger.

I received diverse comments from the feedback, but some patterns emerged: support for the initial output, support for the creative metacognition circle, conceptual questions, new thinking, and improvements in the graphic area.

Two of the experts that gave me feedback have experience in teacher training and in the development of creativity: Kathryn Haydon, M.S., who is the founder of *Sparkitivity*, a consulting company that sparks innovative thinking; and Ismet Mamnoon, M.S, who is the founder of *Beyonder*, an organization that works with youth, parents, and educators and specializes in applying creative thinking.

Kathryn and Ismet agreed that the initial input stage was important and gave their support to that part of the model. From their feedback I learned that it is very common for teachers not to accept themselves as creative, and that this should be a cornerstone for the development of creativity. Kathryn suggested that "this is something professional development often misses" (K. Haydon, personal communication, April 11, 2018). Having this backup for the first progression was very important, because witnessing support for something I believe in deeply helped me to see that I was on the right track.

In addition to the previous two experts, I also received feedback from Diego Uribe, M.S., founder of *Idemax,* a creative platform for the businesses of the future, and *Tinkertrak,* which is a creative education lab. Jonathan Garra, M.S., a middle school teacher who has co-authored articles on creativity and education, also provided feedback. These four experts agreed that the Creative Metacognition Circle is powerful, has an element of ongoing learning, and features an iterative nature that is very important for creative learning. They reaffirmed the idea that learning should be organic and does not necessarily go from A to B. This is especially true for creative learning, where the social aspect is integral, which can be observed in the designing, co-designing, and reflection parts of the model.

One of the most interesting outcomes from the feedback process was that many questions arose. The experts asked me questions, and from their comments I asked myself questions. From the First Input, I now wonder if it is a linear sequence, or if choosing and being creative is something that might happen at the same time. Diego Uribe commented that "one should be clear that phenomenon in action is non-linear in its nature and with no clear boundaries between phases and dynamics" (D. Uribe, personal communication, April 10, 2018). This helped me to put into words how difficult it has been to express graphically such a complex phenomenon as

the development of creativity. Another big question or wonder was related to the first creative learning experience. Kathryn suggested that teachers should experience first-hand creative learning before designing creative learning (K. Haydon, personal communication, April 11, 2018). These are a few examples of conceptual questions that arose, and as I am writing many more continue to appear. I believe they will continue to come, which is probably the nature of creative learning.

There was some new thinking and theories that came from the feedback. For example, Jonathan talked about the Conscious Competence Ladder (The Life Coach Centre, 2017; Figure 7) and the Componential Theory of Creativity (Amabile, 2013) (J. Garra, personal communication, April 10, 2018), both of which were concepts I had not thought of before, but going through them, I saw some ideas there that could be of great value for my model. Another important new thinking was provided by Diego when he asked, “What are the individual and collective behaviors that trigger Creative Metacognition and maximize learning potential?” (D. Uribe, personal communication, April 10, 2018). This made me think about which might be the correct approach for the Creative Metacognition Circle: should I focus more on creativity or on learning?

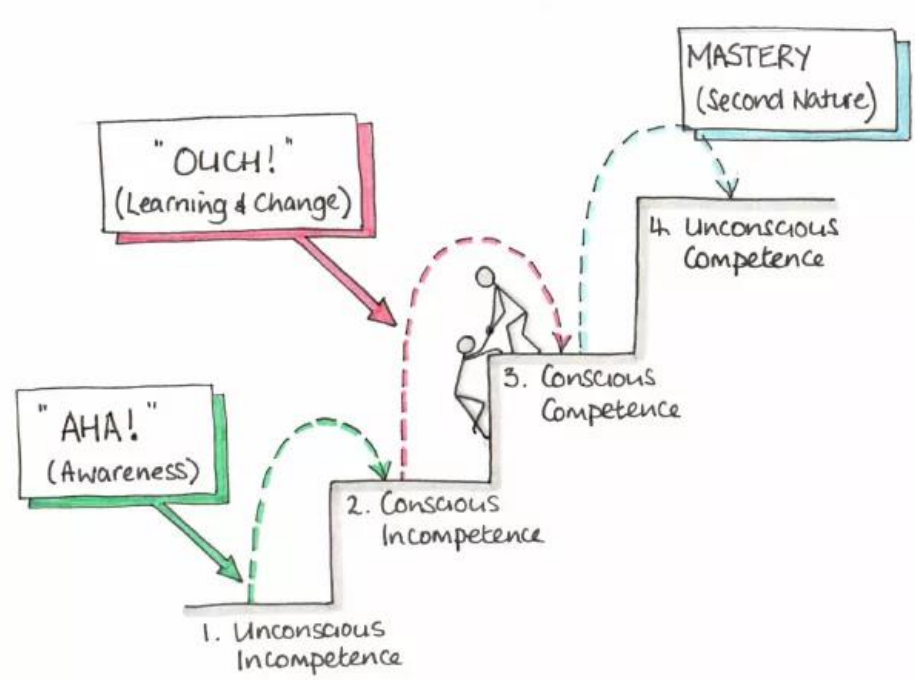

Figure 7. The Conscious Competence Ladder (Life Coaching Center, 2017)

There was an agreement between the experts and myself that the graphics of the model could be improved. Usually I do all my designing, but I have come to appreciate expertise, and therefore I decided to contact a graphic designer who met with me, learned about the model, and was excellent at translating my ideas (as you can see in Figure 8).

Not all of the new ideas and concepts from the experts' feedback were incorporated into the final design for this project; many of the ideas are very interesting, and I want to take the time to let them incubate and continue to iterate on them for further development of this model.

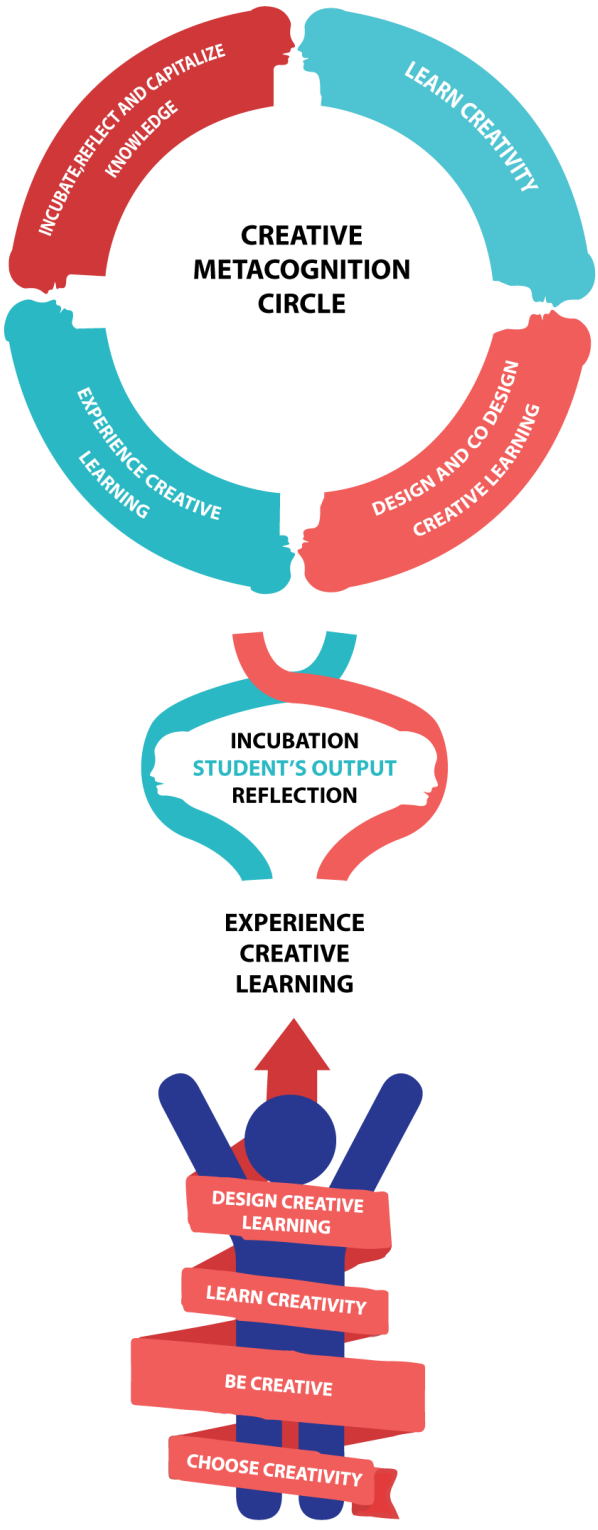

Figure 8. Pedagogical Model for the Development of Creativity updated

SECTION FIVE: KEY LEARNINGS

Introduction

This project offered many key learnings in my personal and professional development. I had some important breakthroughs in terms of conceptual learning and about my creative process. I believe this Master's project has been an important milestone in my career, because it has helped me to settle my own beliefs about creativity and has given space for new thinking. It has also shed some light onto my future professional and personal life, and how I might start being a key agent in the shift of Chilean education.

One of the greatest insights I had was the objective of creative development: if I had just created a model and presented it, I believe I would have crashed into a huge wall, wondering "Why develop creativity?" "What is the ideal outcome?" Now I know that the purpose of creative development is to achieve creative metacognition. Having an ultimate purpose gives the idea of a process a larger sense of importance. To follow up on this, I need to elaborate on why it is important to achieve creative metacognition in life, and if creative metacognition is even achievable in a lifetime. I believe that we never cease to learn and grow, so I need to articulate that balance between lifelong learning and development, enjoying the journey, and moving towards a purpose.

Another important learning was about my personal creative process. Time management has always been an issue for me, and I had to become more disciplined so that I would be able to achieve my goals and be proud of my work. At first, I was frustrated, because I was not able to move forward, and time was running out. When I again came across the Fritz (1989) model, it helped me understand my frustration and provided a clearer focus for me.

Another important learning, along the same line of thought, was the idea of the Minimum Viable Product (MVP; Quora, 2018). I was expecting to create the ultimate model that would

represent the process exactly as it happens. The truth is, I need a MVP to get there. This project was the starting point, as there was no way I would exit this project with the finished model. Reviewing my experience in learning, models change, and you need to have a first version, so you can share it, try it, see what works well, see what can work better, and see what does not work.

I have also learned two very valuable things about highlighting the essence of complex and multidimensional processes. One is being able to be simple without falling prey to oversimplification; it is very important to find a balance between simple and doing the process justice. While attempting to make a process visually simple, there are many dimensions that can get lost into the graphics without showing the reality of the phenomenon. The second thing I learned about highlighting the essence is to have an approach. In the case of this model, I am using a behavior approach at the beginning, but then it turns into an outcome/product approach. So how might I continue with the behavior approach? Is creative metacognition and lifelong learning more about attitude and behavior than about product and outcome? These are elements that are still settling in my mind.

Overall, looking at my model I see two strong points and two that need further development. The *First Input* and the *Creative Metacognition Circle (CMC)* are strong ideas that can even work by themselves. The first creative learning experience and the output from this experience need further clarification. In this case I believe they are the weaker links; I need to put further thinking into them to better reflect my ideas. Even though the CMC is a strong point of the model, it needs further maturation to better understand how it works and how the different elements within it work and interact.

If I had to start this project now, based on my experience, I would start conceptualizing the visual layout of the model earlier. According to Thilmany (2005), it is very important to experiment as early and often as possible. When time passes, and the deadline is coming, you will have less time to explore and dive into ideas because you will be more pressured to achieve something, so there are fewer opportunities to experiment and receive feedback and iterate based on that feedback.

Overall, my initial goals were mostly achieved. I have reached a deeper understanding of the creative and educational phenomena, and I now have a clearer understanding of my own view about creative development and how might we best achieve it. I have a clearer understanding about myself and my creative process, and as time passes, I have learned how to deal best with my time management skills. Due to my frustration at the beginning of the project I misused a few weeks of time, but I was able to reorganize my time and objectives so that my work was of value, not just for me, but for the field of creativity and education.

SECTION SIX: CONCLUSIONS

New Thinking About Creativity and Change Leadership

After completing this project, I have discovered how important it is to understand and accept yourself. If you are going to lead any type of change, you must have gone through some change yourself. Creativity is so natural to humans, but at the same time, it is so difficult to fully embrace and understand. The more I learn about creativity, the more I realize that there is so much more to know about it. This project has reaffirmed the idea that the development of creativity goes beyond the conceptual understanding: there is also a personal transformation behind it.

Apart from the personal development, I have come to greatly value the idea of learning communities- true communities whose goals are to learn from each other and to contribute to each other's' learning. It is important to build a network of people who are interested in similar topics as you and that might offer new perspectives and experiences, a network where you will contribute as well.

Something very important that I now better understand about creativity is how deeply it is related to learning and cognition, and our integral development. It confirms my idea about creativity being the missing link in education; it provides cognitive, personal, academic, and social growth. If we develop creativity, we are developing at a more complete and profound level.

Next Steps

I see this model has a great potential for future work. It is a framework that will likely work well with existing programs and models of creative development. I believe there is a great potential for professional development - especially in the first stages - helping teachers choose,

value, and accept their own creativity. The model helps to creates a roadmap for institutions and teachers to organize their creative development.

Further work needs to be carried into defining what makes up a Creative Learning Experience (CLE). How should a CLE be? What are the key elements within the CLE? How is it organized? Is there one ultimate best CLE, or there are guidelines? Should the CLE have a behavior-only approach so that it suits different programs? I know there is wide selection of research about this, and I would like to dig deeper. What makes me happy is that I do not feel as though I am going in a different direction, I would just be going deeper into a part of my model. I have created my personal framework.

The Creative Metacognition Circle has become something powerful for me. I want to pursue this further, and even though there is relevant literature, I want to do this experimentally. What I see myself doing with this is creating a program with teachers that want to develop creativity and working together with their experiences to build a more clear framework around this model. I see this becoming a doctoral project in the future. In this experience, I was not able to spend much time discussing and experimenting with the model, but with the minimum interactions I had (i.e. receiving feedback from experts), some amazing potential ideas and conceptual questions appeared. I get excited just thinking about how much farther this model could go if I worked collaboratively with a community of teachers.

To sum up this experience, I am very pleased and proud of the process and outcome of my project. I can observe how parts of my own creative development are present in my model, and I am excited about the future - not only around the model, but also around the goal of bringing creativity into education and how I will be a part of that important mission.

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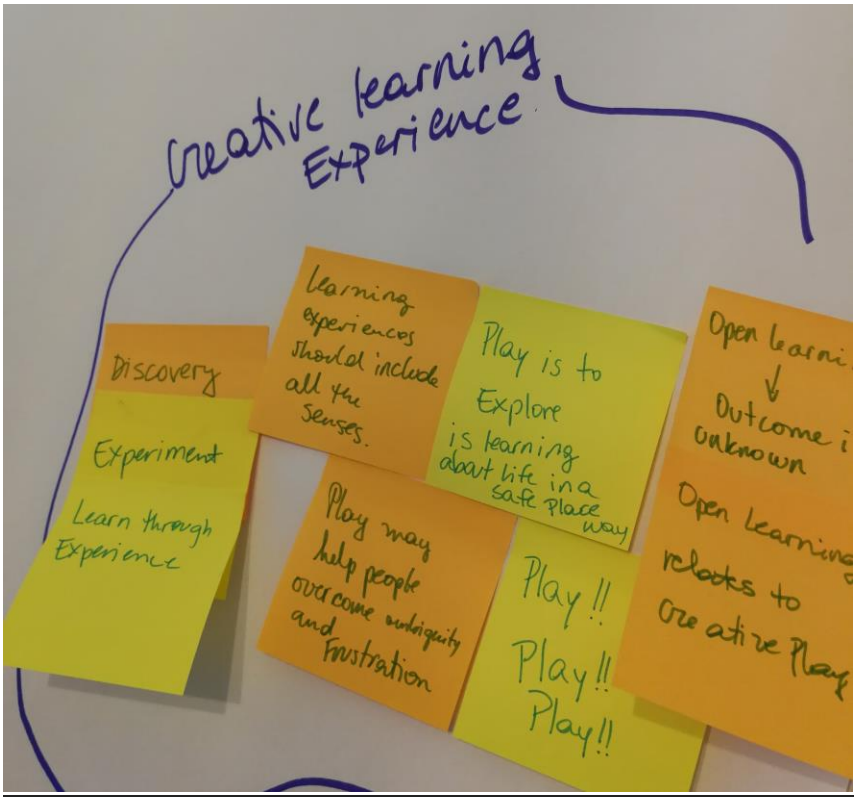
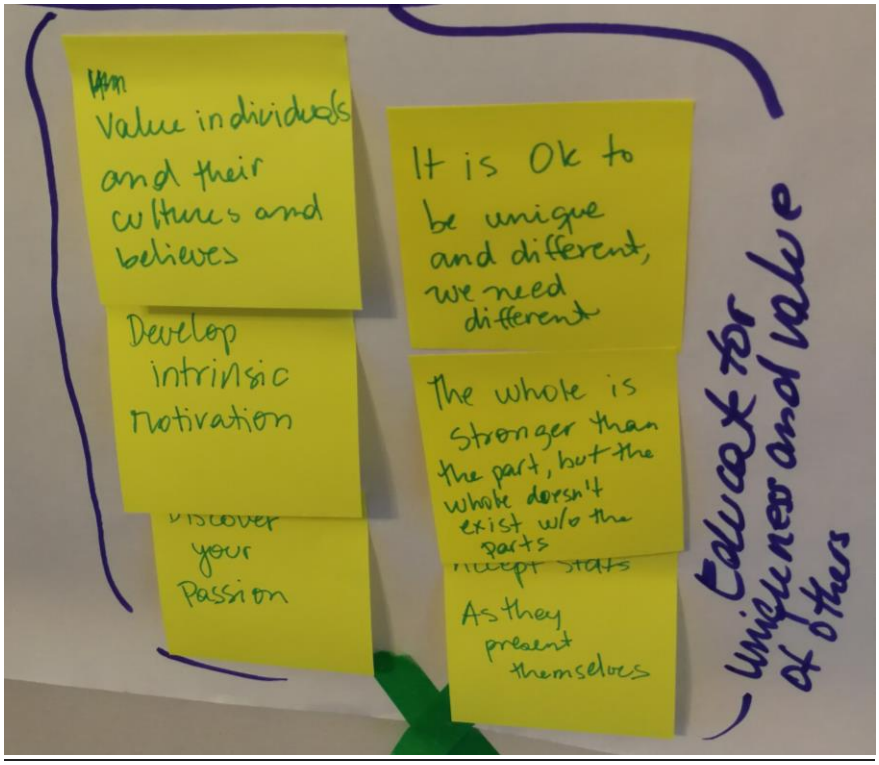
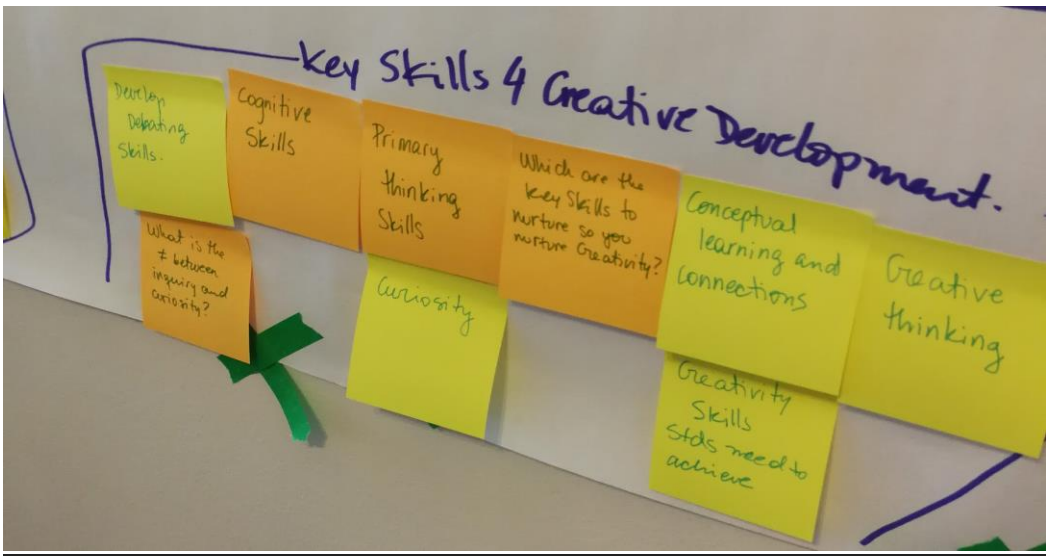
Appendix A

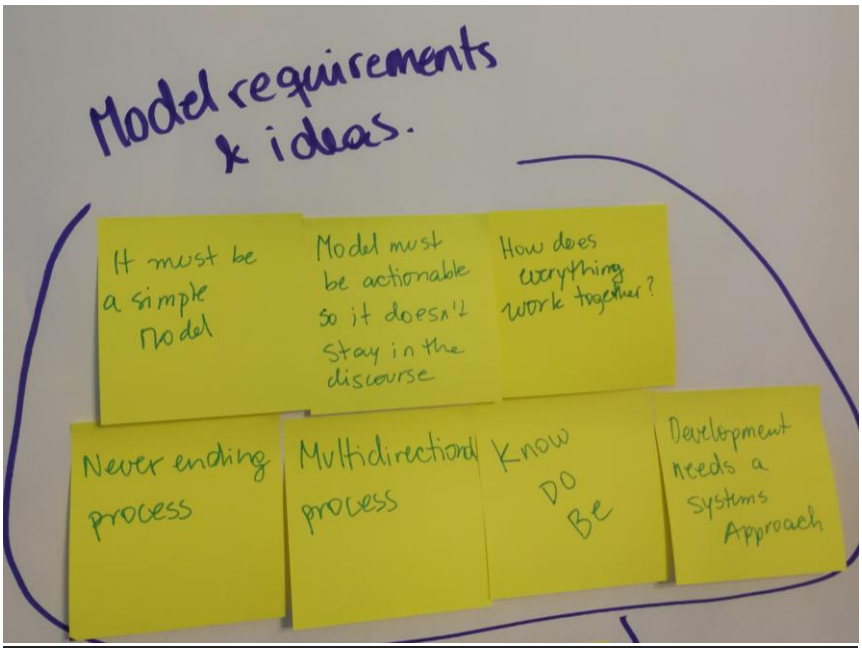
Clusters and ideas from the convergent process

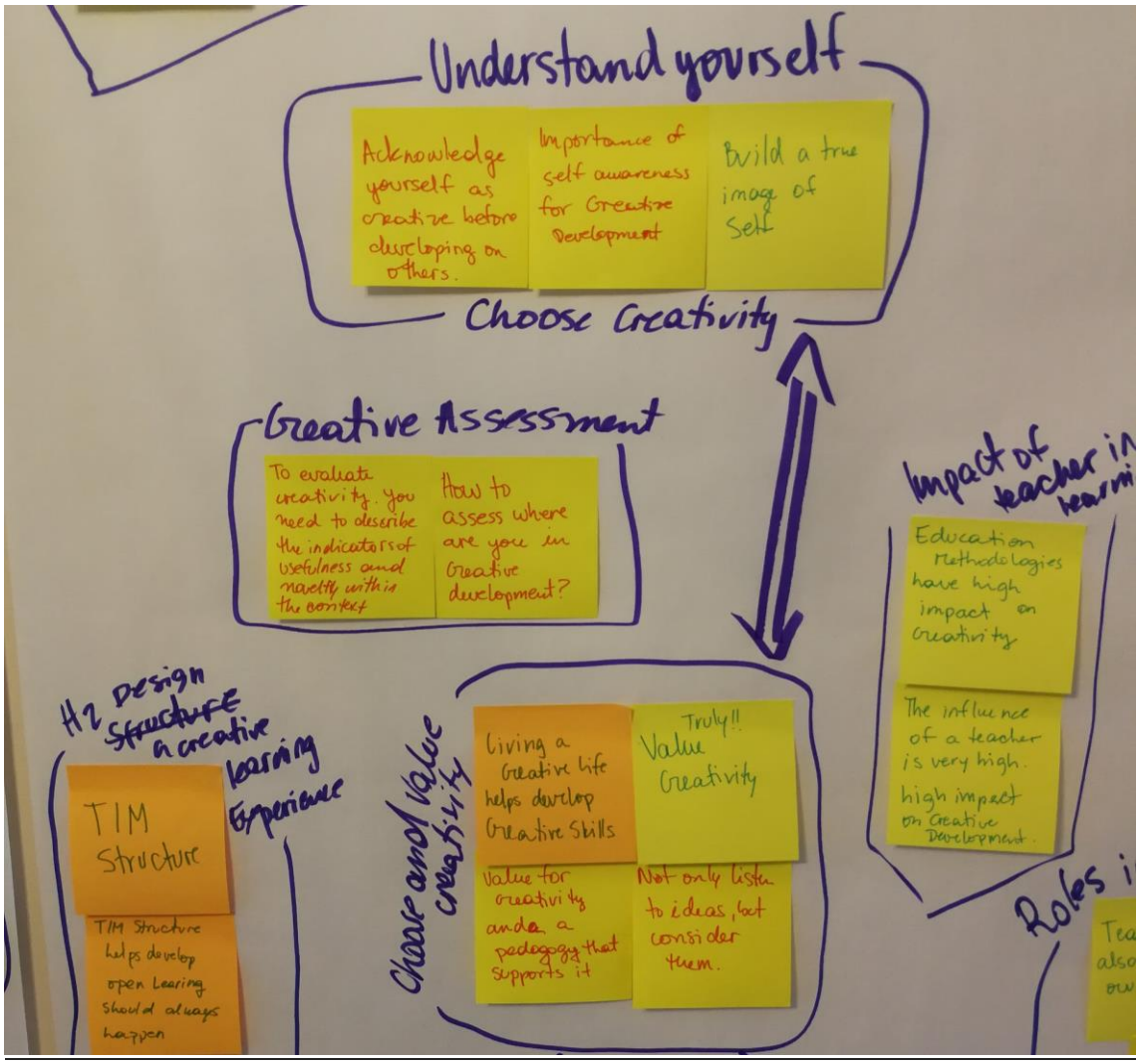


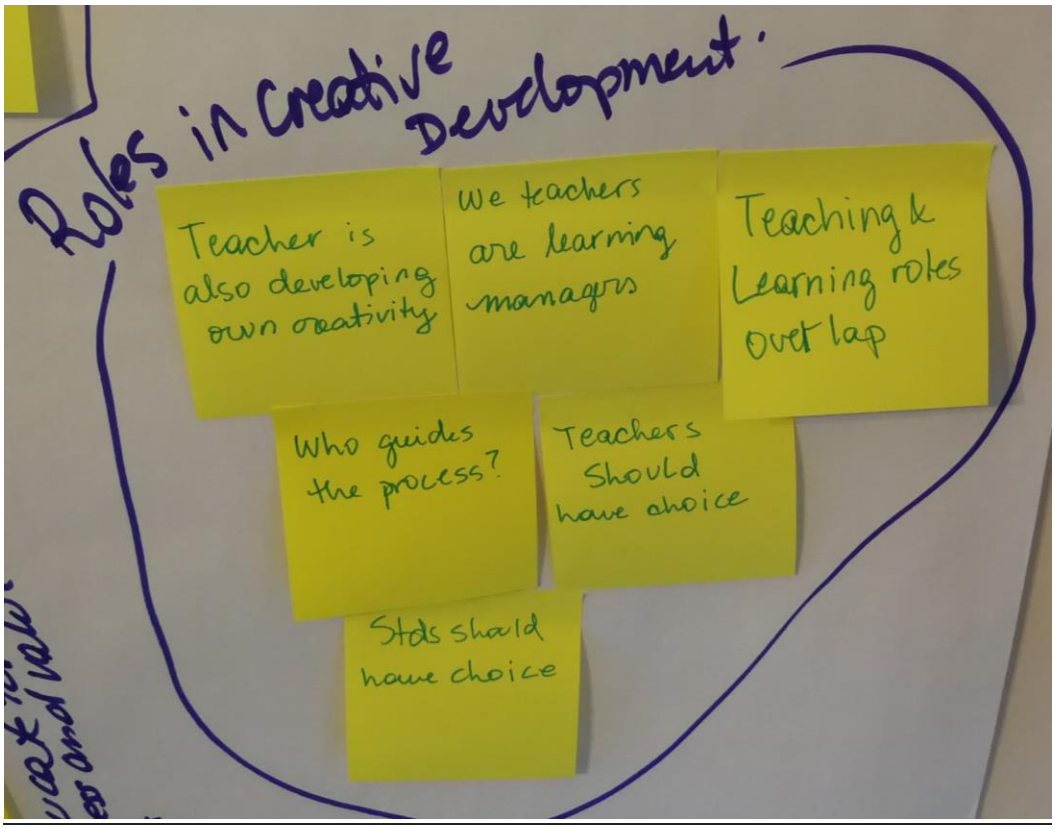

Value individuals and their cultures and believes
It is Ok to be unique and different, we need different
Develop intrinsic motivation
The whole is stronger than the part, but the whole doesn't exist w/o the parts
Discover your Passion
As they present themselves
Educate for uniqueness and value of others

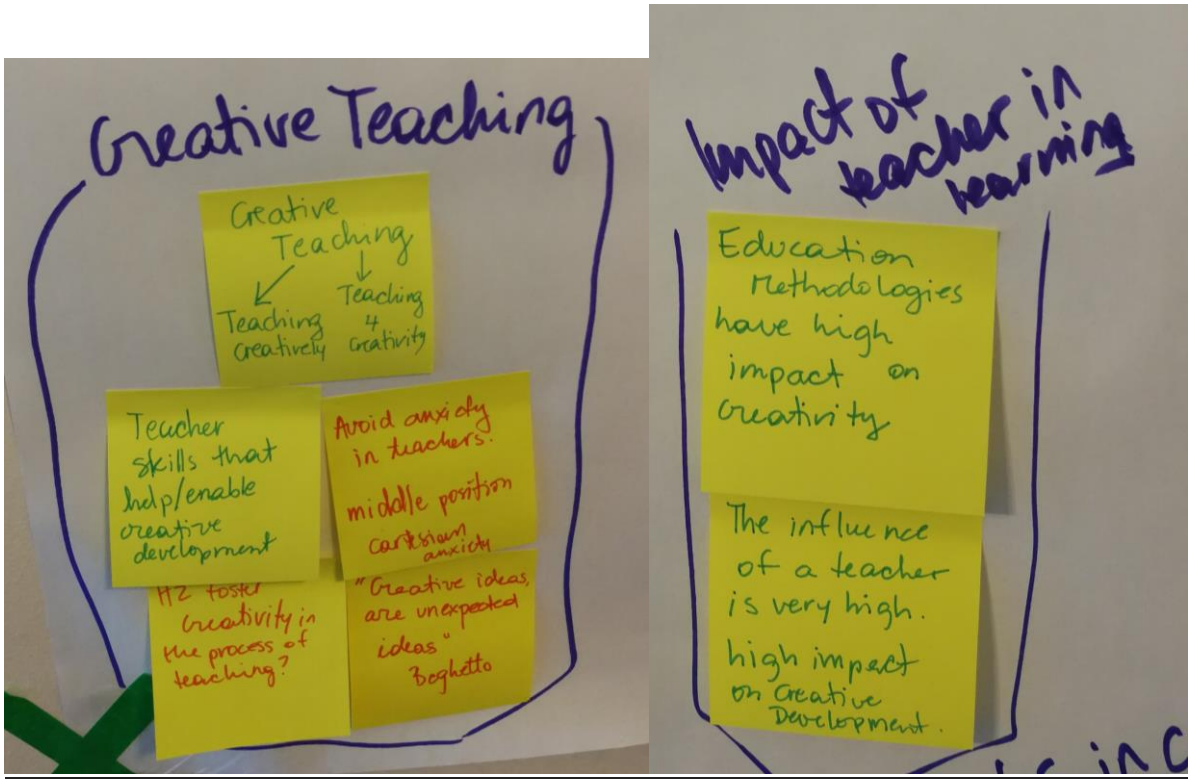

Key Skills 4 Creative Development.
Develop Debating Skills.
Cognitive Skills
Primary thinking Skills
Which are the key Skills to nurture so you nurture Creativity?
Conceptual learning and connections
Creative thinking
What is the ≠ between inquiry and curiosity?
Curiosity
Creativity Skills Skls need to achieve

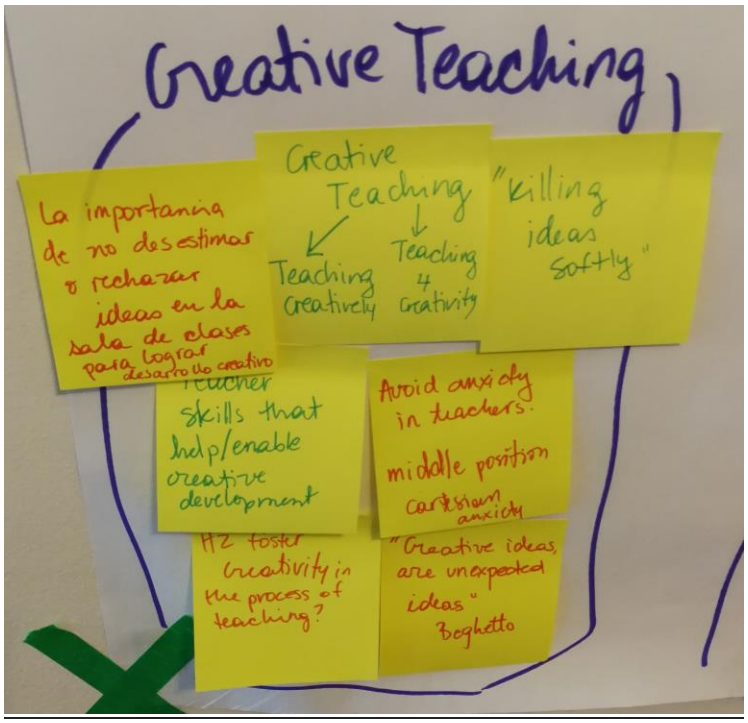

Conceptual and personal understanding of creativity
Conceptual understanding of creativity
Which creative behaviors?
Attitude
Creativity continuum
cCC
Structure
Knowledge
give it structure in your Brain

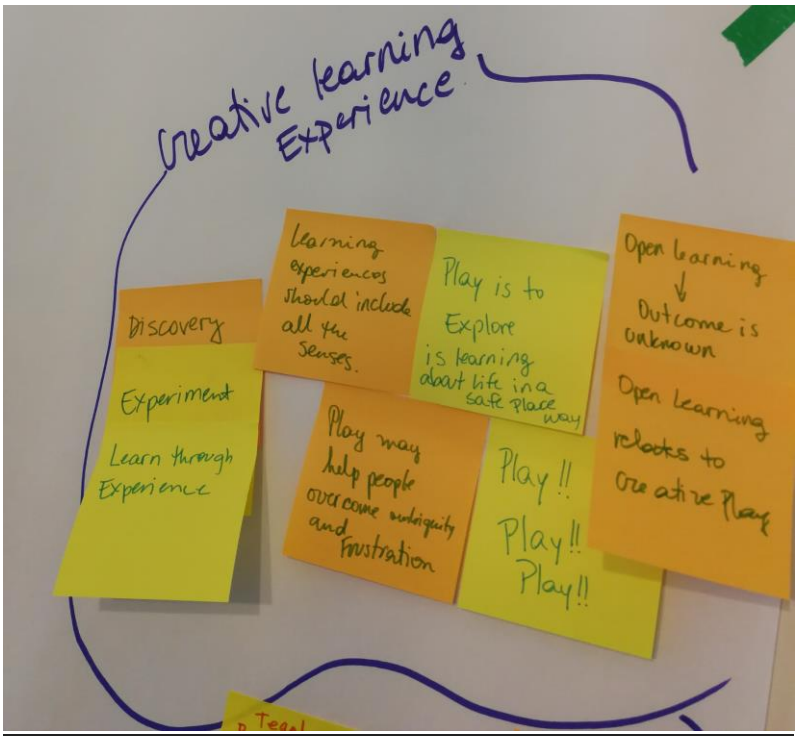

Model requirements & ideas.
It must be a simple Model
Model must be actionable so it doesn't stay in the discourse
How does everything work together?
Never ending process
Multidirectional process
Know
DO
Be
Development needs a systems Approach

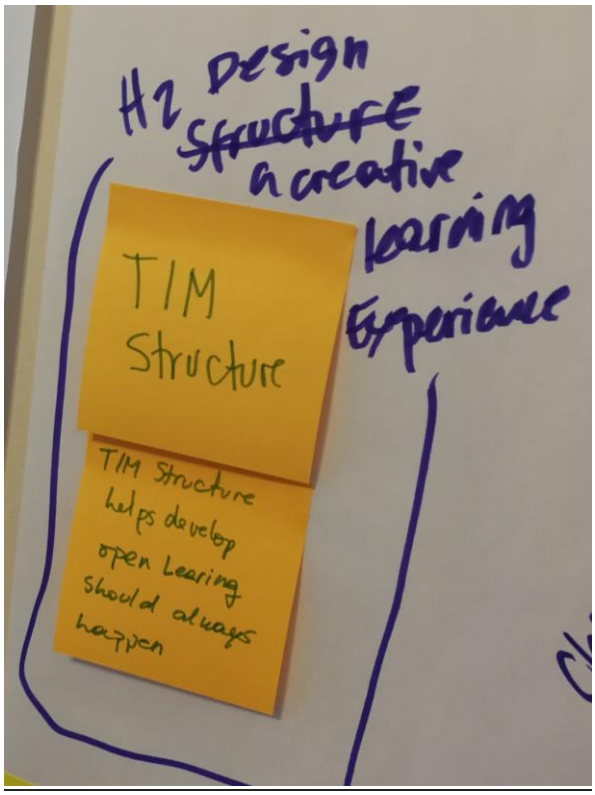

Understand yourself
Acknowledge yourself as creative before developing on others.
Importance of self awareness for Creative Development
Build a true image of Self
Choose Creativity
Creative Assessment
To evaluate creativity, you need to describe the indicators of usefulness and novelty within the context
How to assess where are you in Creative development?
Impact of teacher in
Education Methodologies have high impact on Creativity
The influence of a teacher is very high.
high impact on Creative Development.
H2 Design Structure a creative learning Experience
TIM Structure
TIM Structure helps develop open Learning should always happen
Choose and Value creativity
Living a Creative life helps develop Creative Skills
Truly!! Value Creativity
Value for creativity and a pedagogy that supports it
Not only listen to ideas, but consider them.
Roles

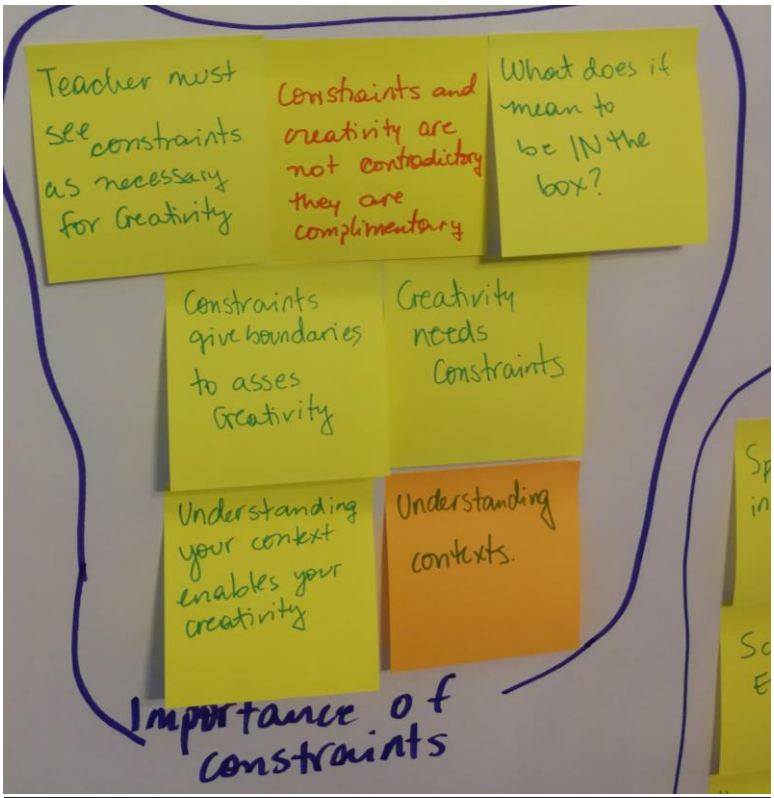

Roles in Creative Development
Teacher is also developing own creativity
We teachers are learning managers
Teaching & Learning roles overlap
Who guides the process?
Teachers Should have choice
Stds shald have choice

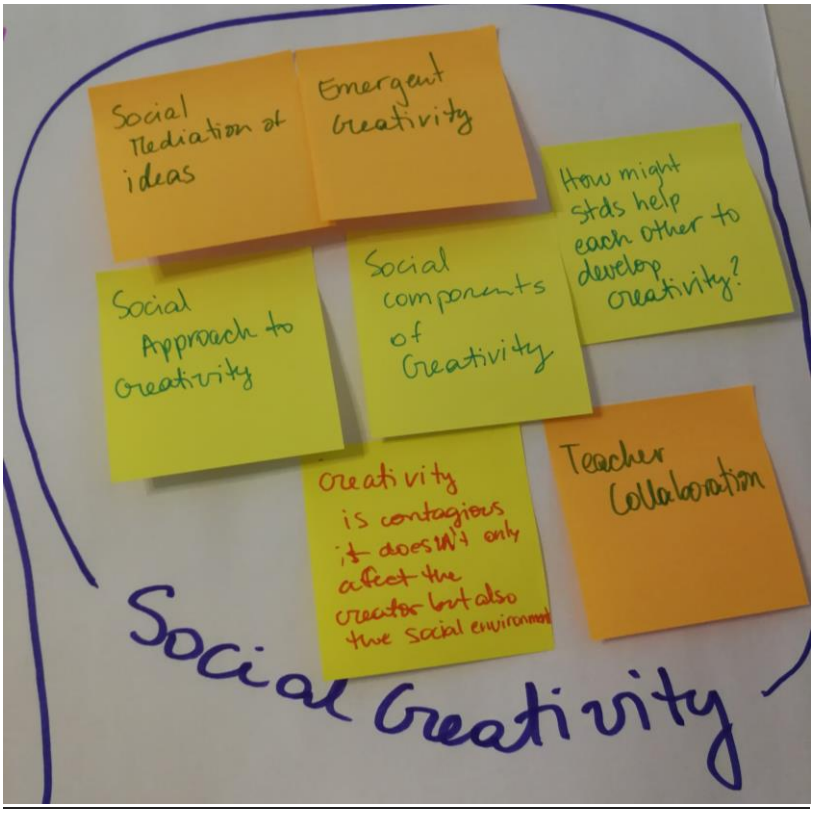

Creative Teaching
Creative Teaching
Teaching Creatively
Teaching 4 Creativity
Teacher skills that help/enable creative development
Avoid anxiety in teachers.
middle position
Cartesian anxiety
H2 foster Creativity in the process of teaching?
"Creative ideas are unexpected ideas"
Boghetto
Impact of teacher in learning
Education Methodologies have high impact on creativity
The influence of a teacher is very high.
high impact on Creative Development.

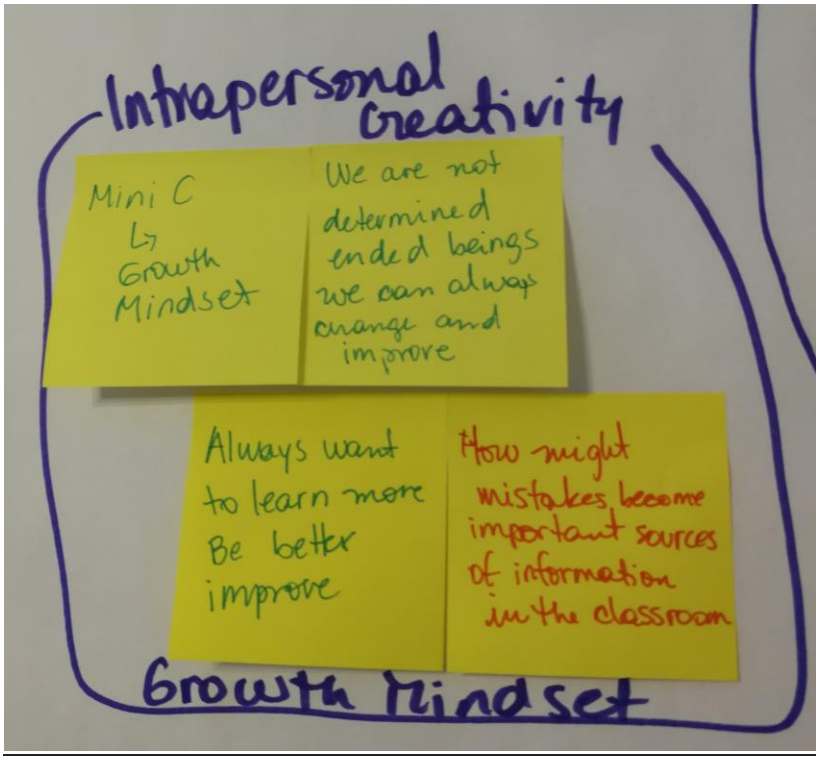

Creative Teaching
La importancia de no desestimar o rechazar ideas en la sala de clases para lograr desarrollo creativo
Creative Teaching
Teaching creatively
Teaching 4 Grativity
"killing ideas softly"
skills that help/enable creative development
Avoid anxiety in teachers.
middle position
anxiety
How to foster creativity in the process of teaching?
"Creative ideas are unexpected ideas"
Boghetto

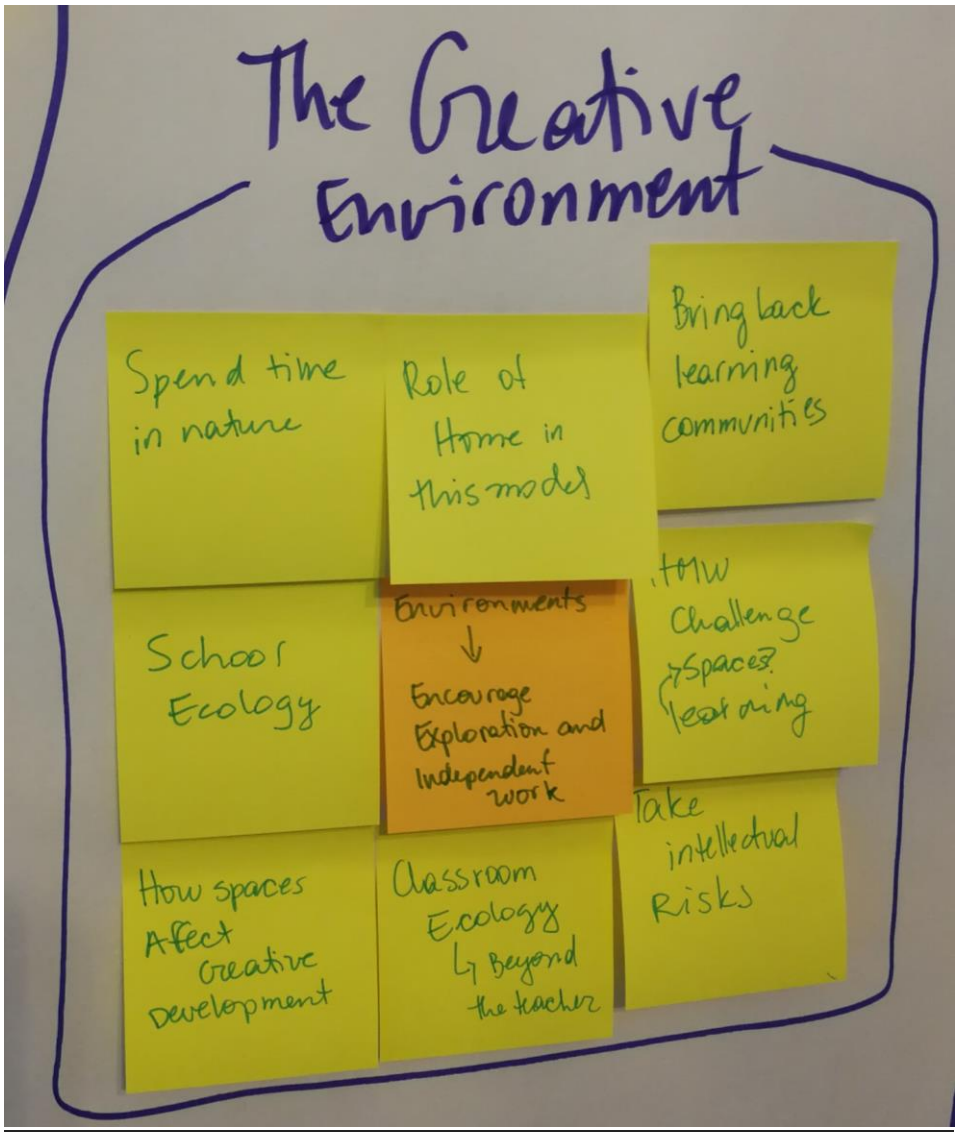

Creative learning Experience
Discovery
Experiment
Learn through Experience
Learning experiences should include all the senses.
Play is to Explore is learning about life in a safe place way
Play way help people overcome ambiguity and frustration
Play !!
Play !!
Play !!
Open learning
Outcome is unknown
Open Learning relates to Creative Play

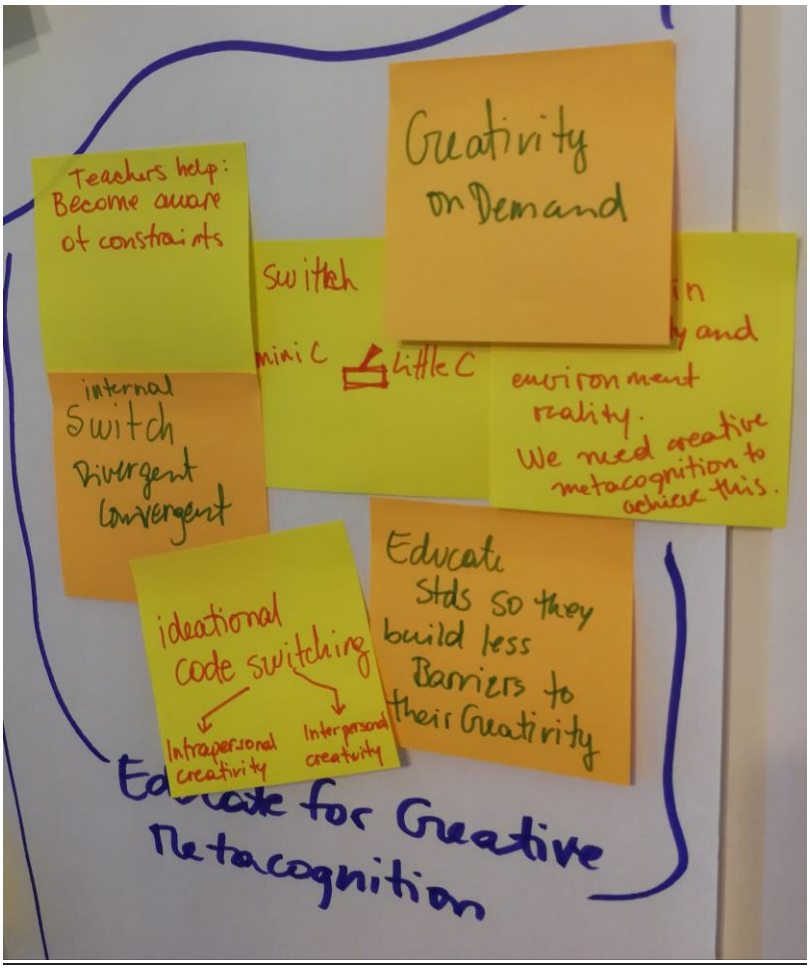

H2 Design
~~Structure~~
a creative
learning
Experience
TIM
Structure
TIM Structure
helps develop
open Learing
should always
happen

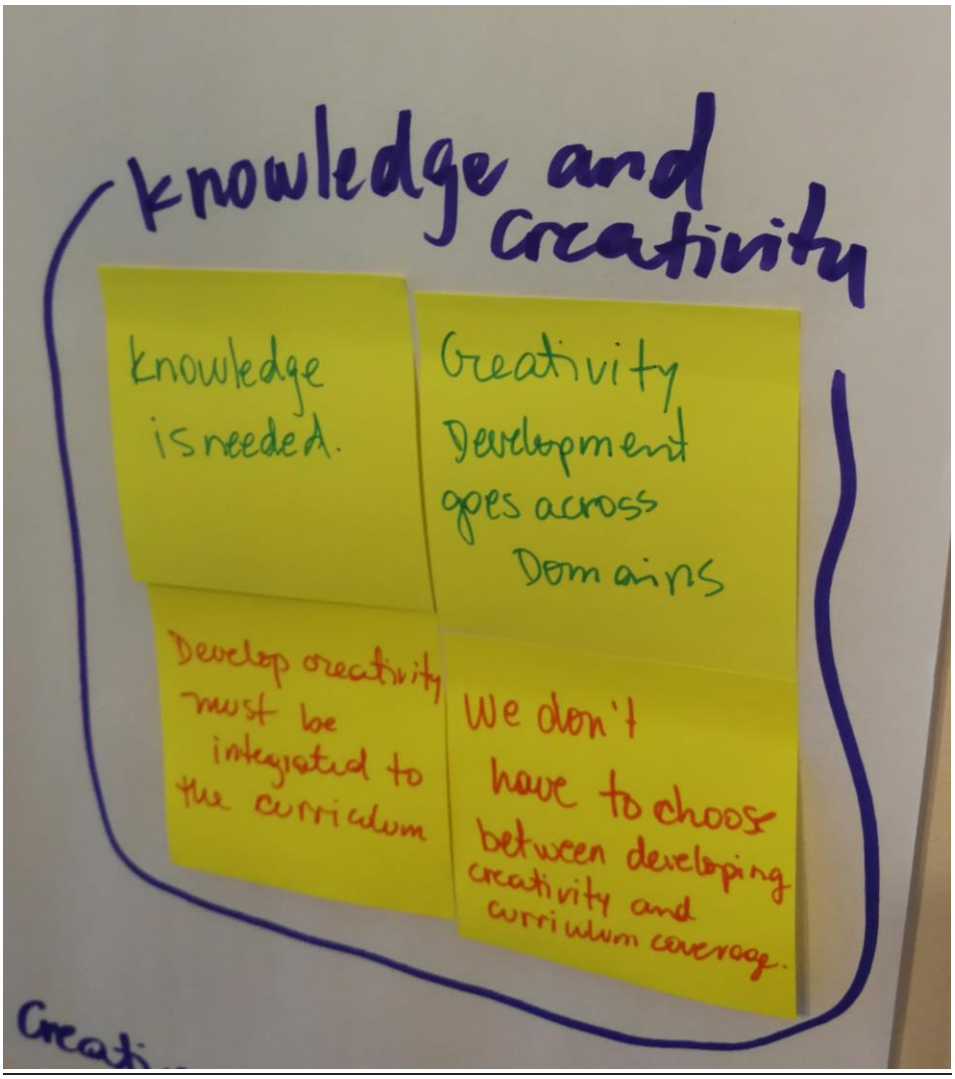

Teacher must
see constraints
as necessary
for Creativity
Constraints and
creativity are
not contradictory
they are
complimentary
What does it
mean to
be IN the
box?
Constraints
give boundaries
to asses
Creativity
Creativity
needs
Constraints
Understanding
your context
enables your
creativity
Understanding
contexts.
Importance of
Constraints

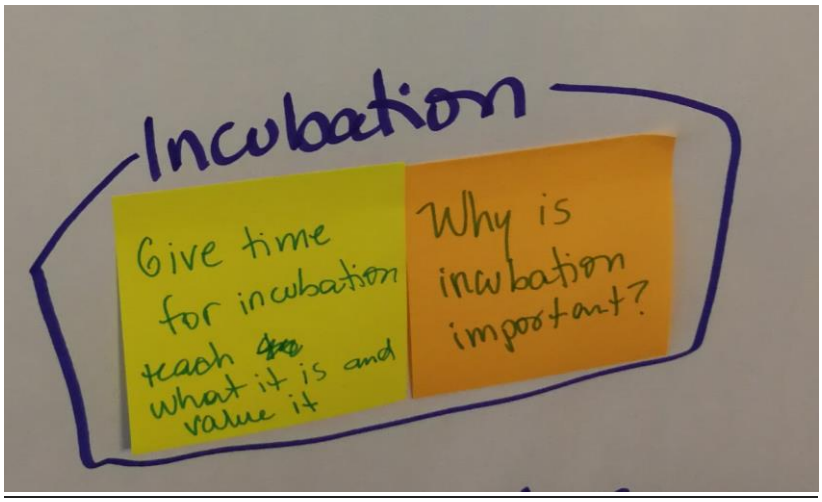

Social Mediation of ideas
Emergent Creativity
How might stds help each other to develop creativity?
Social Approach to Creativity
Social components of Creativity
Creativity is contagious it doesn't only affect the creator but also the social environment
Teacher Collaboration
Social Creativity


Intrapersonal Creativity
Mini C
↳ Growth Mindset
We are not determined ended beings we can always change and improve
Always want to learn more Be better improve
How might mistakes become important sources of information in the classroom
Growth Mindset


The Creative Environment
Spend time in nature
Role of Home in this model
Bring back learning communities
School Ecology
Environments ↓ Encourage Exploration and Independent work
HOW Challenge Spaces? learning
How spaces Affect Creative development
Classroom Ecology ↳ Beyond the teacher
Take intellectual Risks

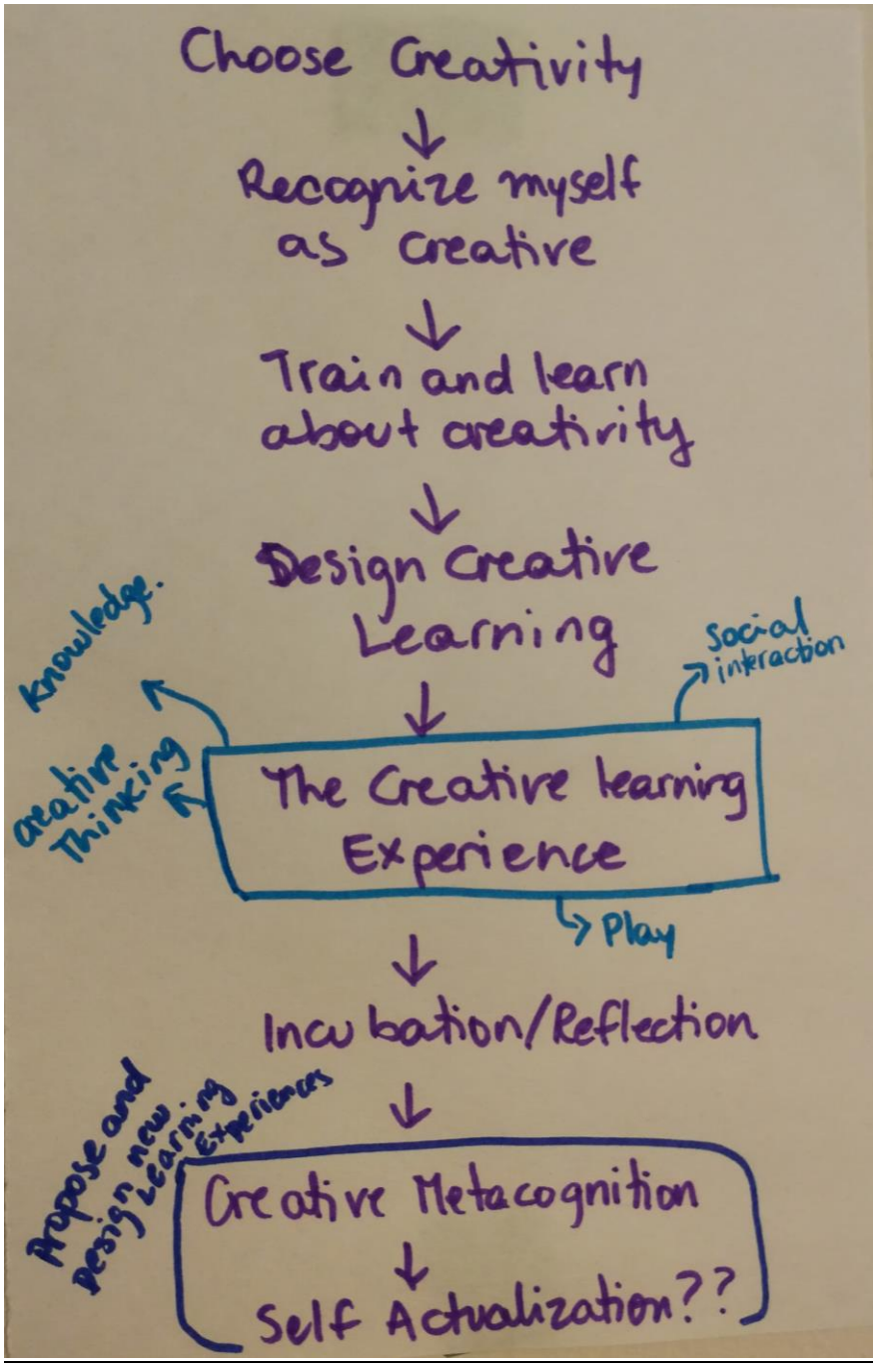

Teachers help:
Become aware
of constraints
Creativity
on Demand
switch
mini C
little C
internal
Switch
Divergent
Convergent
environment
reality.
We need creative
metacognition to
achieve this.
Educate
Stds so they
build less
Barriers to
their Creativity
ideational
code switching
Intrapersonal
creativity
Interpersonal
creativity
for Creative
Metacognition

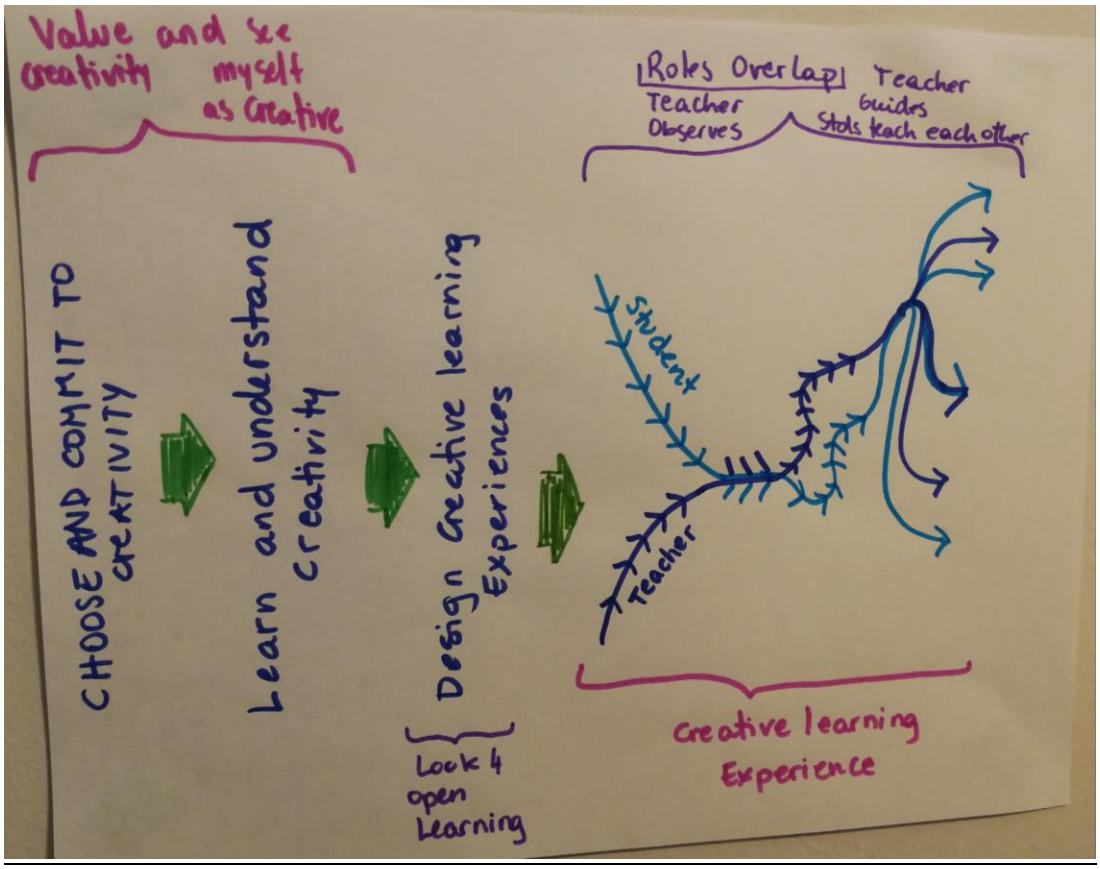

knowledge and creativity
knowledge is needed.
Creativity Development goes across Domains
Develop creativity must be integrated to the curriculum
We don't have to choose between developing creativity and curriculum coverage.

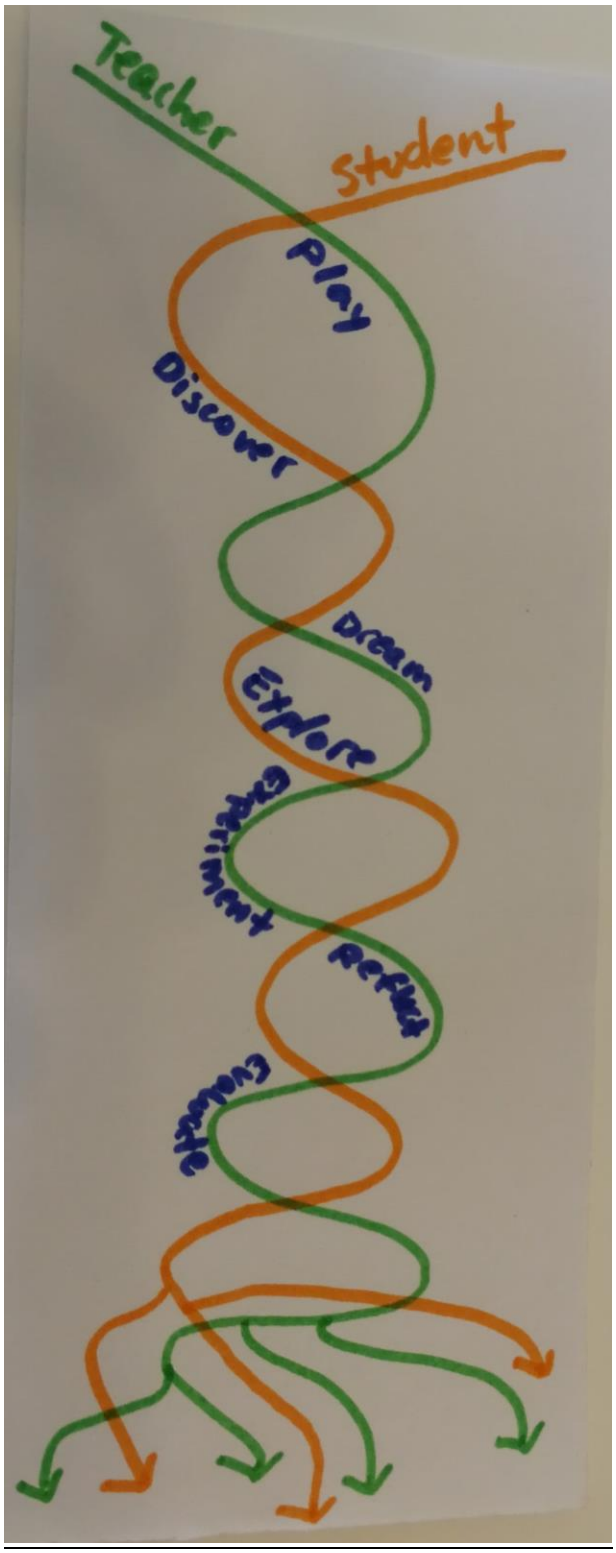

Incubation
Give time for incubation teach what it is and value it
Why is incubation important?

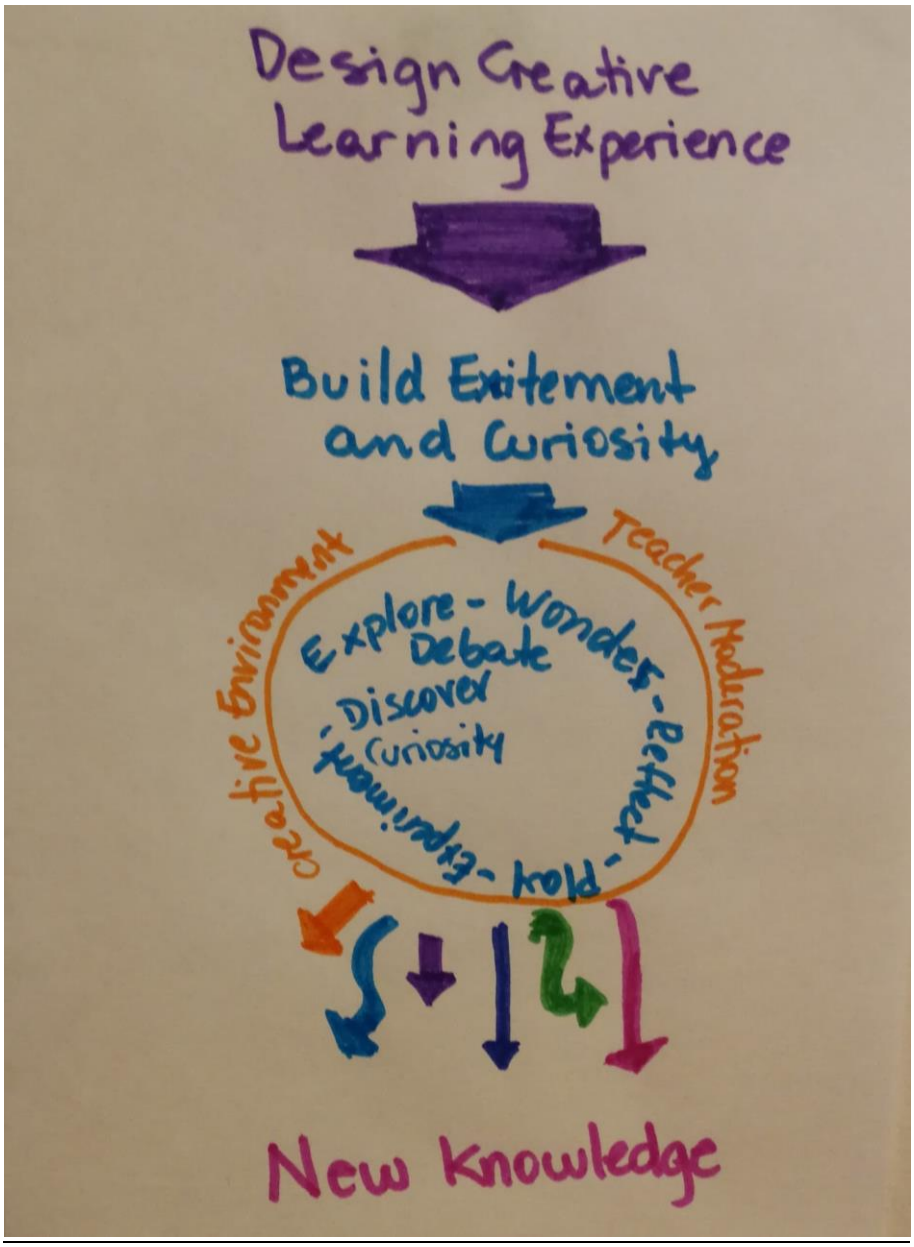
Appendix B

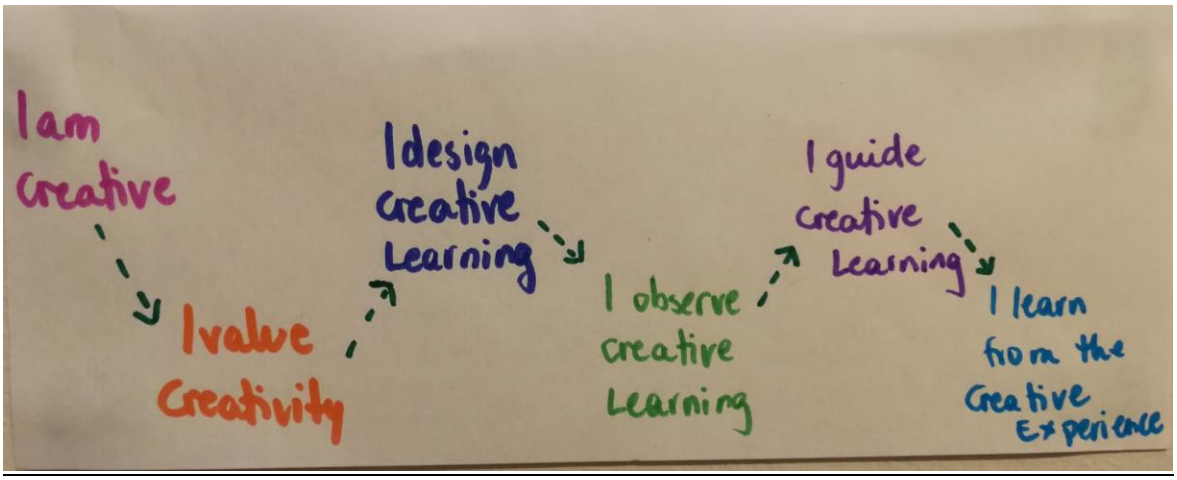
Prototypes of pedagogical models for the development of creativity

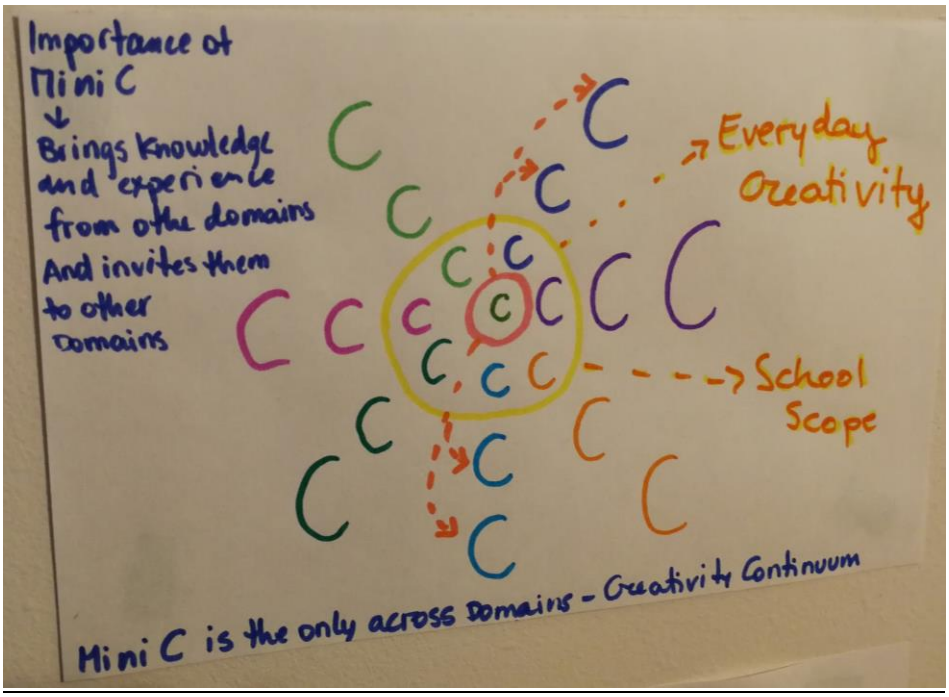



Value and see creativity myself as Creative
CHOOSE AND COMMIT TO CREATIVITY
Learn and understand creativity
Design Creative learning Experiences
Look 4 open Learning
Roles Overlap
Teacher Observes
Teacher Guides Sts teach each other
Student
Teacher
Creative learning Experience


Teacher
Student
Play
Discover
Dream
Explore
Experiment
Reflect
Create

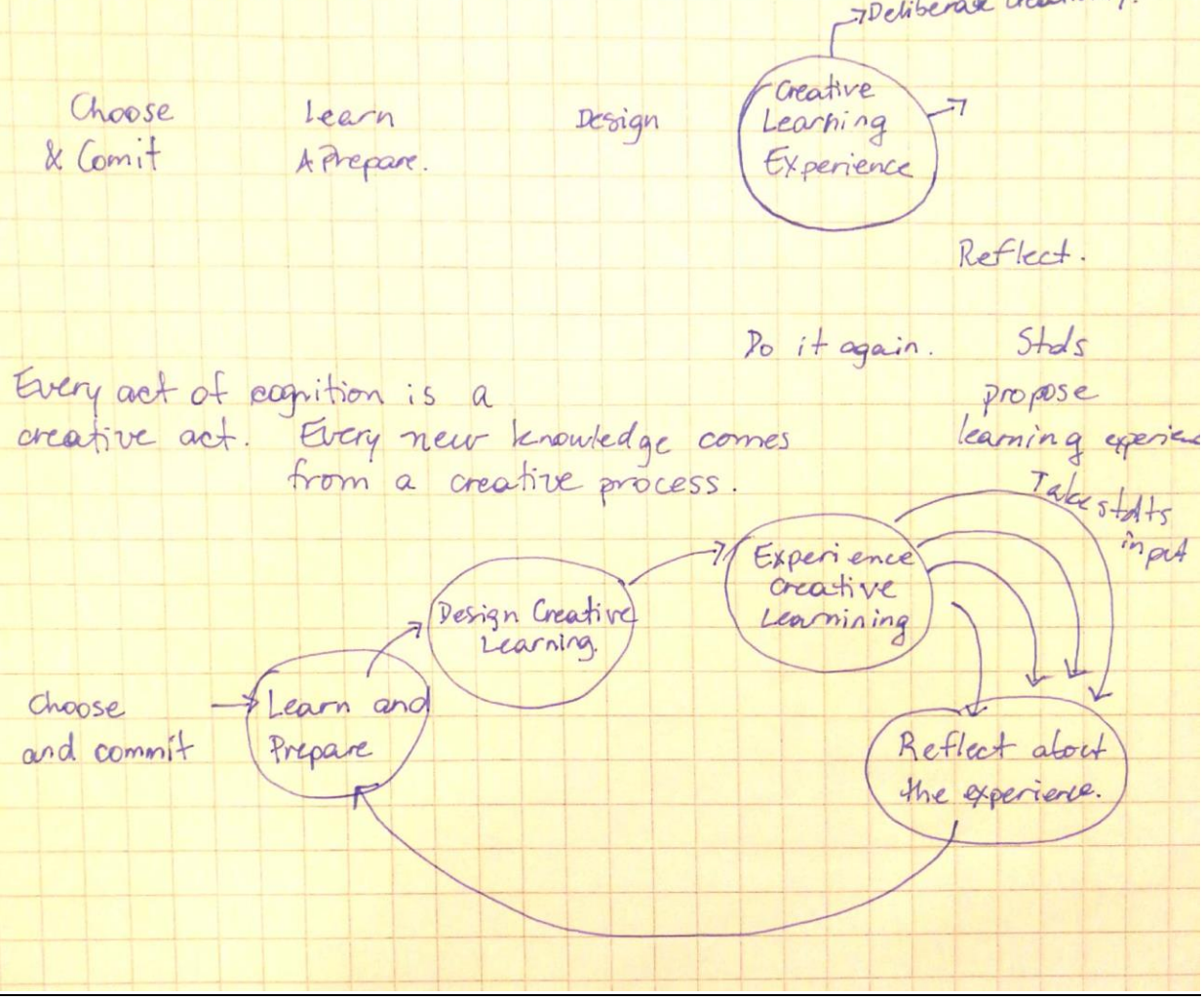

Design Creative Learning Experience
Build Exitement and Curiosity
Teacher Moderation
Explore - Wonder - Debate - Discover - Curiosity - Experiment - Play - Refine
Creative Environment
New Knowledge

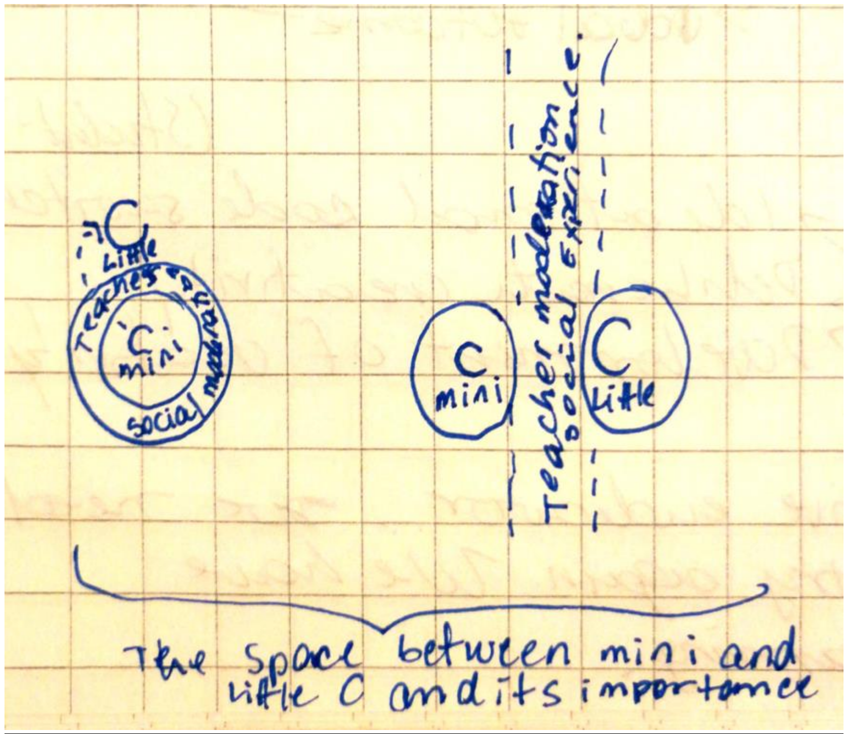

I am Creative
I value Creativity
I design Creative Learning
I observe creative Learning
I guide creative Learning
I learn from the Creative Experience

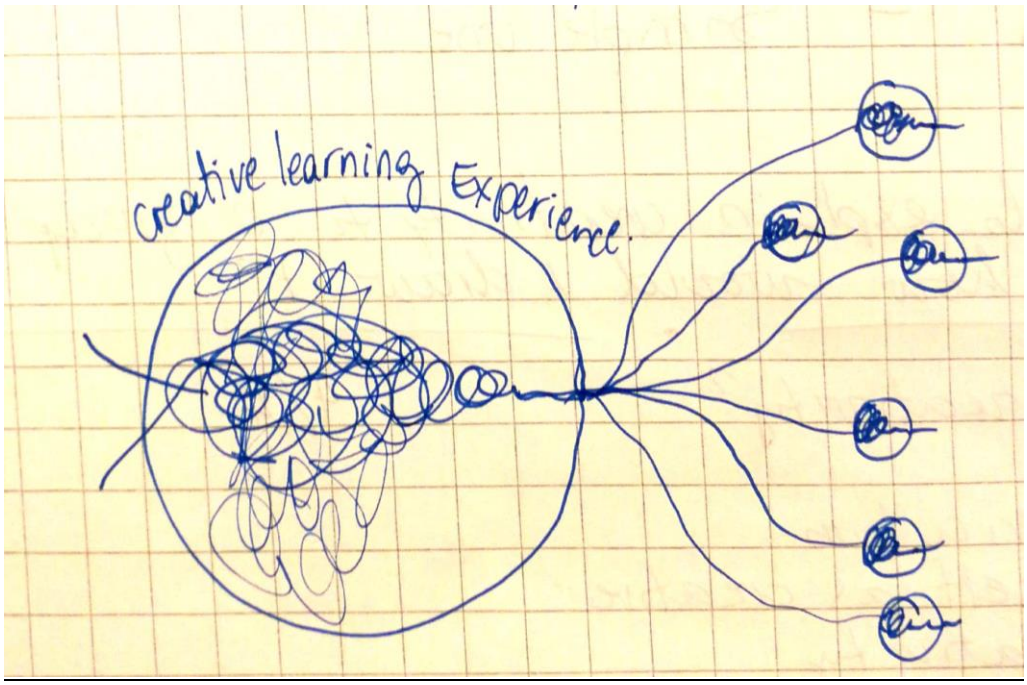

Importance of Mini C
Brings knowledge and experience from other domains And invites them to other Domains
Everyday Creativity
School Scope
Mini C is the only across Domains - Creativity Continuum

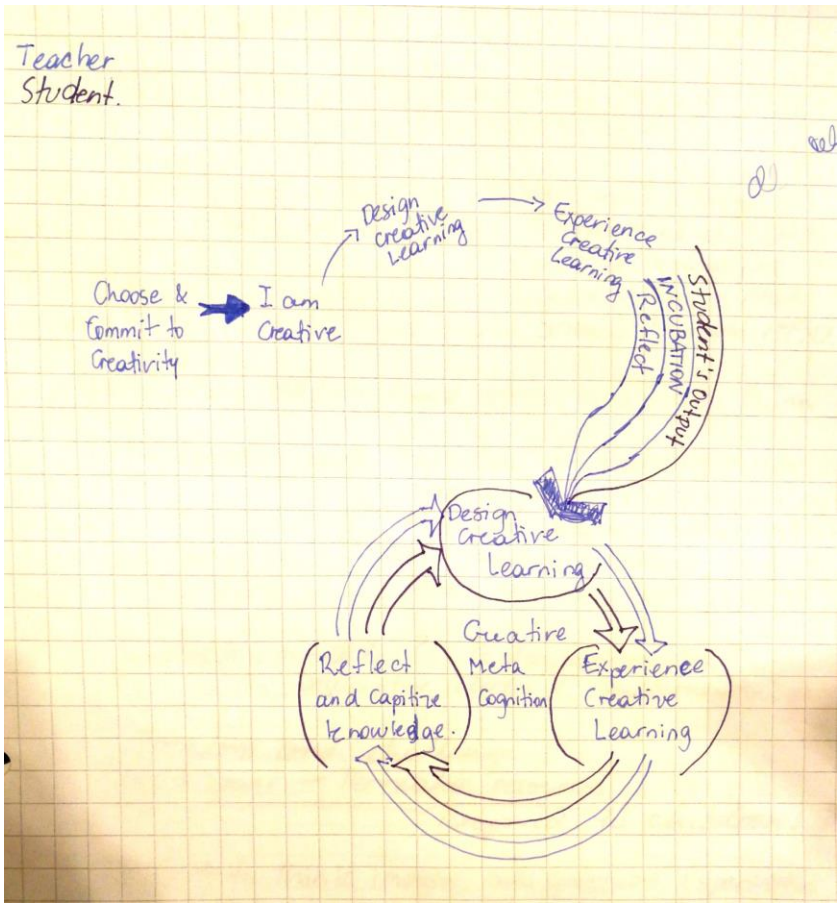
Prepare ⟶ Be open, Be flexible, things will fail.

If we are not ready to fail, how can we expect students to fail?



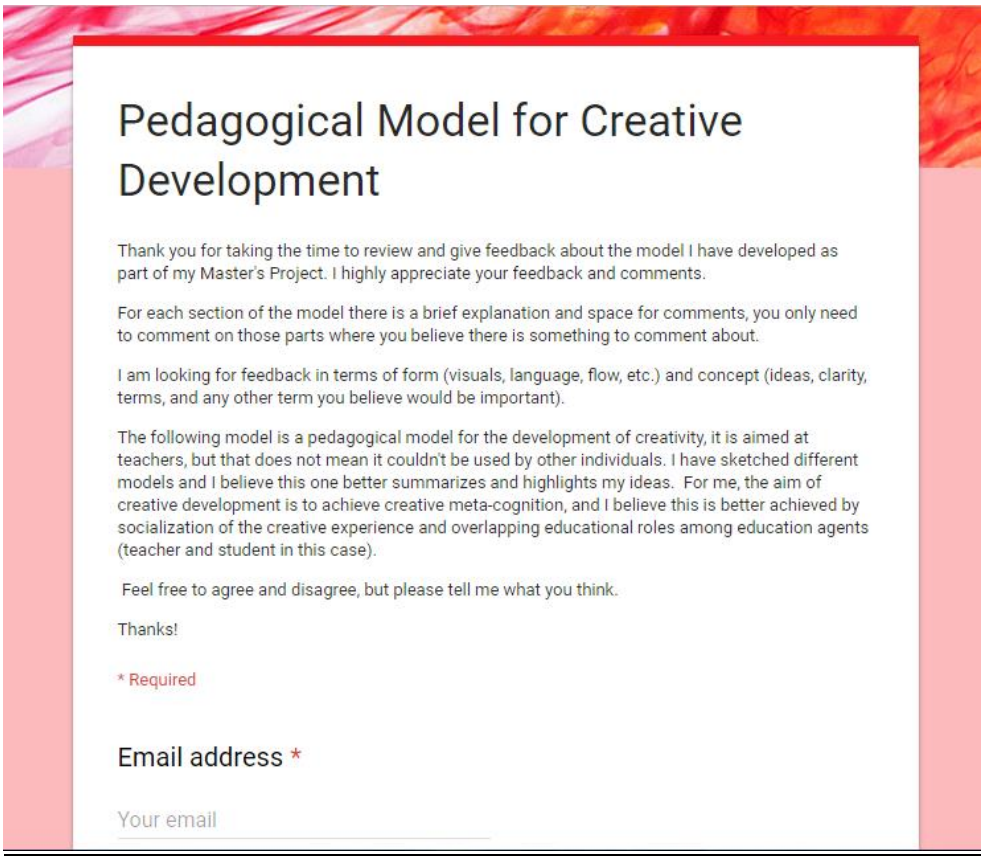

C
Little
Teacher
C
mini
social
C
mini
Teacher moderation
social experience
C
Little
The space between mini and
little C and its importance


creative learning Experience.


Teacher
Student.
Choose & Commit to Creativity
I am Creative
Design creative Learning
Experience Creative Learning
Reflect
INCUBATION
Student's Output
Design Creative Learning
Reflect and Capitize knowledge.
Creative Meta Cognition
Experience Creative Learning

Appendix C

Online form for expert feedback



Pedagogical Model for Creative Development

Thank you for taking the time to review and give feedback about the model I have developed as part of my Master's Project. I highly appreciate your feedback and comments.

For each section of the model there is a brief explanation and space for comments, you only need to comment on those parts where you believe there is something to comment about.

I am looking for feedback in terms of form (visuals, language, flow, etc.) and concept (ideas, clarity, terms, and any other term you believe would be important).

The following model is a pedagogical model for the development of creativity, it is aimed at teachers, but that does not mean it couldn't be used by other individuals. I have sketched different models and I believe this one better summarizes and highlights my ideas. For me, the aim of creative development is to achieve creative meta-cognition, and I believe this is better achieved by socialization of the creative experience and overlapping educational roles among education agents (teacher and student in this case).

Feel free to agree and disagree, but please tell me what you think.

Thanks!

* Required

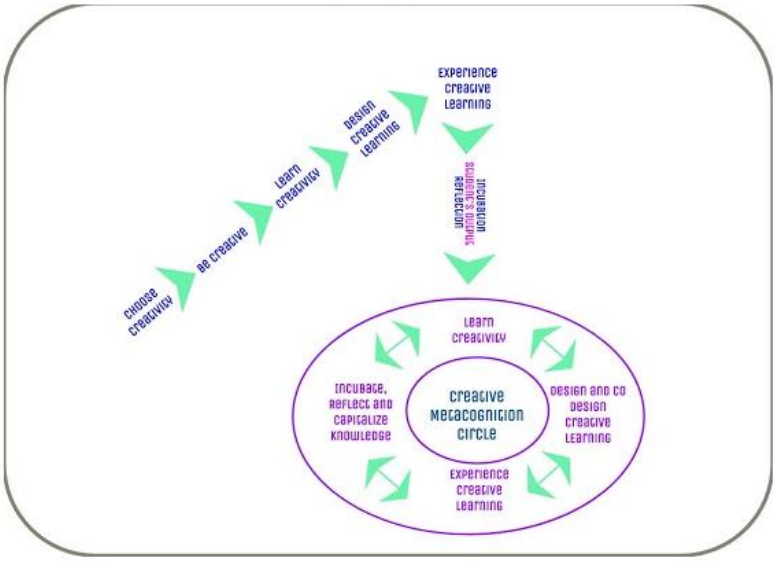
Email address *

Your email

Brief description of your background on Creativity and/or Education (what do you do? what have you studied? where have you studied? where have you worked?) *

Your answer

Pedagogical Model for the Development of Creativity



First Input

The First Input is aimed at the teacher
Choose Creativity: Decide you want to develop creativity, and be deliberate about it, value creativity.
Be Creative: Understand that you are a creative being.
Learn Creativity: Learn about creativity, learn about different ways of integrating creativity to education and your professional practice.
Design Creative Learning: Deliberately decide how your creative learning experience is going to be, what skills are you aiming to develop, how will you achieve this?
Experience Creative Learning: This is the first experience of being deliberate at creativity with your students. Observe yourself through the experience, observe them as well.

First Input comments

Your answer

Output of the First Creative Learning Experience

From your first creative learning experience you will have your personal experiences and student's experiences. Reflect on your own experiences and those from your students. Let the experience incubate.

Output of the First Creative Learning Experience comments

Your answer

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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 A Pedagogical Model for the Development of Creativity as an online resource.

_____

Carolina Schnapp R.

_____

Date