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### Designing a Framework for an Online Course about Creativity in Education

Luciane Bonamigo Valls

Bonamigo Valls

Valls

Luciane Bonamigo Valls  
luciane.valls@gmail.com

#### Advisor

Susan Keller-Mathers

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Designing a Framework for an Online Course about Creativity in Education  
by

Luciane Bonamigo Valls

An Abstract of a Project  
in  
Creative Studies

Submitted in Partial Fulfillment  
of the Requirements for  
the Degree of

Master of Science

April 2021

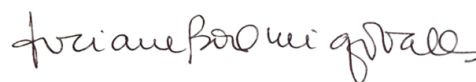
Buffalo State  
State University of New York  
Department of Creative Studies

## ABSTRACT OF PROJECT

## Designing a Framework for an Online Course about Creativity in Education

Creativity has been gaining more and more attention in the last years in a world with an unprecedented level of change and uncertainty. There is an increasing demand for people to think and act creatively. However, our current educational system is not conducive to creativity. K-12 teachers usually do not get training in schools of education to teach for creativity, which means there is a need for additional creativity training. This project focuses on creating a framework for an online course about creativity in education for K-12 Brazilian teachers. An extensive literature review about the primary needs of teachers and some input from Brazilian teachers about their expectations and needs for an online course helped determine the course content. The course has eight modules. The course content is organized around some questions - why, what, who, where, when, and how (5W1H) about creativity in education. The course framework was designed based on online course best practices to promote engagement and interactions among participants.

*Keywords:* creative education, creativity training, teachers' training, online courses



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Luciane Bonamigo Valls

04/28/2021

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Date

Buffalo State  
State University of New York  
Department of Creative Studies

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A Project in  
Creative Studies

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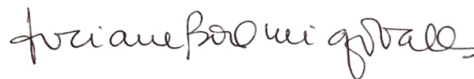
04/28/2021



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Susan Keller-Mathers  
Associate Professor

04/28/2021



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Luciane Bonamigo Valls  
Student

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## **SECTION ONE: BACKGROUND TO THE PROJECT**

### **Purpose**

The purpose of this Master's project is to design a framework for an online course about creativity in education to help K-12 teachers promote creativity in their schools. This course will include the increasing need for creativity in the XXI century, definitions and myths of creativity, teachers' creativity development, learning environments conducive to creativity, and strategies to incorporate creativity intentionally into the teacher's practice.

### **Description of the Project**

The primary outcome for this Master's project will be a framework for an online course about creativity in K-12 education, including the course content, learning goals, and additional resources. The specific content of the course will be determined through my inquiry in this Master's project. The course will be in Portuguese, and the target audience is K-12 Brazilian teachers. This course is not linked to any institution, and I will offer it directly to teachers/schools as one of the services provided by my educational consultancy.

My ultimate goal is to create and launch the complete online course, but this goes beyond this project's scope. In this Master's project, I will get input from K-12 teachers about their expectations of an online course in creative education before drafting the course framework. I will then ask teachers to review this draft to continue the development of the course and design the final framework.

Besides the framework for the online course, this Master's project will also have four additional outcomes: a list of teachers' expectations and needs about this training and three summaries on online courses' best practices.

### **Personal Goals**

1. Gather relevant literature on creativity and education to support my interventions as a Creative Education Consultant.
2. Create an online course about creativity in K-12 education that will be offered to Brazilian teachers.
3. Strengthen my identity as a Creative Education consultant by widening my portfolio of services in the field of creative education.
4. Become a change leader in creative education in Brazil by deepening my creativity and education expertise.

### **Rationale for Selection**

In 2019, when I applied to the Master's Program in Creative Studies, I wrote in my statement of intent that I believed the program could help me develop a project that combined two of my passions: education and creativity.

I have been in the field of education for more than 20 years. I am originally from Brazil, and I worked for more than ten years as an educational psychologist, working with students, teachers, and families. After moving to the USA, due to my interest in the educational area, I have volunteered in many programs at my children's elementary school, such as Odyssey of the Mind, Time to Invent Club, and Invent It Challenge. These were great experiences that helped me learn about creativity, problem-solving,

and invention. They made me realize that the creative process could be intentionally taught.

When I worked in Brazil, I remember I thought schools needed to be different. I did not use the word creative at that time, but I knew they needed to be more flexible, consider different perspectives, offer more alternatives, foster curiosity, and tolerate mistakes. Now I realize I wanted schools to be more creative.

When I first watched the famous TED Talk *Do Schools Kill Creativity*, delivered by Ken Robinson in 2016, I was happy to see someone having the courage to say that schools were not promoting creativity because I also felt that way. However, I was also worried about not doing enough to change the situation. Before entering the program, I watched a talk given by Kathryn Haydon (2017), an alumna from this program. She talked about "possibility questions", and it was the first time I listened to a "what might be all the" (WMBAT) type of question. Her talk made me ask, "What might be all the ways to nurture creativity in schools?" and "What might be all the ways that I can help teachers and school administrators to bring creativity to schools?"

For the last years, the latter is the question that is guiding me. It led me to this program. It guided me to think about possibilities. When I think about the question, "What might be all the ways that I can help teachers and school administrators to bring creativity to schools?", I noticed I have already done some exciting things. I have been providing online workshops, study groups, and book clubs for Brazilian educators. I wrote a book about creativity in schools that will be published in April in Brazil. And, now, as my Master's project, I chose to develop an online course for Brazilian teachers.

I believe having the chance to offer online training can be a great way to reach educators in the whole country.

In 2015, I completed an online certification called Virtual Teacher Program Specialization. It was a five-course program I took from the University of California-Irvine through Coursera. The program included courses in Foundations of Virtual Learning, Emerging Trends and Technologies in the Virtual K-12 Classroom, Advanced Instructional Strategies in the Virtual Classroom, Performance Assessment in the Virtual Classroom, and a Virtual Teacher Final Project, a capstone project in which I needed to design an online course. At that time, I designed an online course for Brazilian teenagers that I taught for some years. Therefore, I already have some experience designing an online course.

I am aware of two online courses available for Brazilian teachers about creative education. One of them is the course Learning Creative Learning, taught by Mitchel Resnick, professor at MIT Media Lab, which was translated into Portuguese. The other one is the course about Creative and Critical Thinking in Schools, offered by Instituto Ayrton Senna, an educational organization. I already took both of them, and they are great resources for teachers. However, I still see a gap. These courses do not address some of the topics I have been studying, and, therefore, I see an opportunity to develop a new one. I want to offer a course that provides, at the same time, relevant content based on research in the area but also helps teachers to recognize and develop their own creativity, including hands-on activities, opportunities to reflect on their practices, and suggestions of strategies to include in their classrooms.

The choice to design an online course is a way to integrate creativity and education, which I love and am intrinsically motivated to pursue. Moreover, it is also a way to address one of the most critical needs in today's education.

Puccio et al. (2012) considered creativity as "a life skill that must be nurtured in our homes and schools, well before our future leaders reach the workplace" (p. 26), making it clear we can not wait until students grow up to start teaching them creative skills. Nussbaum (2013) even said we should construct "a pedagogy of creativity that we should all learn from kindergarten through university" (p. 247).

There is no doubt that there is a need to promote creativity in schools. Since I decided to work with Brazilian teachers, I realized it was essential to understand what was going on in the field of creativity in education in Brazil. In order to learn more about that, I took an Independent Study in the J-Term. I found out about two scholars responsible for the growth of this field in Brazil, Dr. Eunice Alencar and Dr. Solange Wechsler. I read some articles and learned about researches and instruments that have been developed there. By having a more in-depth panorama of the field of creativity in Brazilian education, I got a better understanding of the teachers' needs. There is a summary of the report I made on Creativity in Education in Brazil for my Independent Study in Appendix A.

In a study conducted in Brazil, in public and private K-12 schools, more than 60% of the sample said that one of the barriers to promoting creativity in schools was the lack of knowledge about books or articles about the topic (Alencar et al., 2018). There are articles in the field and even books addressing K-12 teachers. However, they are not reaching schools and teachers. Therefore, we need to expand the ways to reach

teachers and give them the information and resources they need to promote creativity.

One more reason I believe an online course can be a valuable contribution to teachers from my home country.



## **SECTION TWO: PERTINENT LITERATURE**

### **Introduction**

Since creativity in education is an area of interest for a while, I already had some readings about the topic when I started this project. They informed my thinking about the need for training teachers and provided some crucial elements that should be part of this creativity training. Therefore, the literature review addresses references highlighting the importance of creativity in general and in schools and some specificities about online education because my ultimate goal is to create an online course. This section is divided into six topics: a) The Growing Importance of Creativity; b) The Need for Teachers' Creativity Training; c) The Importance of Recognizing Teachers' Creativity; d) Creativity and Deep Learning; e) Creativity and Well-Being; and f) Online Courses.

### **The Growing Importance of Creativity**

As the pace of change in the world continues to accelerate, people must learn how to adapt to constantly changing conditions. Success in the future - for individuals, for communities, for companies, for nations as a whole - will be based on the ability to think and act creatively. (Resnick, 2017, p. 158)

The unprecedented level of change we are facing in the last years is underscored by different scholars (Burnett & Dawson-Globus, 2016; Neves-Pereira & Alencar, 2018; Puccio, 2015; Resnick, 2017; Schleicher, 2019). Resnick (2017) argued that people would need to learn how to deal with change and uncertainty because the world is becoming more unpredictable, and they will face lots of unexpected situations. We are even calling this a "VUCA" world, an acronym that stands for volatility, uncertainty, complexity, and ambiguity. This term, initially used by the military to

describe unpredictable environments, became part of organizational, leadership, and educational language. In order to succeed in the VUCA world, students need creative thinking skills (Puccio & Lohiser, 2020).

Therefore, creativity has been considered an essential skill in the workplace. In 2016, the Future of Jobs released the top 10 skills for 2020, and creativity was in third place (World Economic Forum, 2016). In 2018, an updated report placed "creativity, originality, and initiative" as the skills on the rise for 2022 (World Economic Forum, 2018). In 2019, the Workplace Learning, a report by LinkedIn, stated that creativity was the "single-most in-demand skill for companies to cultivate in their employees" (LinkedIn, 2019, p. 20).

The need for creativity is not only emphasized in workplace reports. In 2017, the United Nations included in its calendar the World Creativity and Innovation Day. This day, celebrated on 21 April, was created "to raise awareness of the role of creativity and innovation in problem-solving and, by extension, economic, social and sustainable development" (United Nations, 2017, p. 2).

The increasing demand for creative thinkers is also impacting the field of education. As stated by Burnett and Smith (2019), "developing students' capacity to navigate change, and generate effective solutions to unique problems is an essential part of any twenty-first-century educational process" (p. 196). In 2020, the Schools of the Future report listed eight essential characteristics to promote the high-quality learning defined in the Education 4.0 framework, including "innovation and creativity" among them (World Economic Forum, 2020). The PISA (Programme for International Student Assessment), which measures students' ability to apply their knowledge in new

situations, will include a creative thinking assessment in its next edition in 2022. According to Schleicher (2019), by including a creative thinking test in PISA, the Organisation for Economic Co-operation Development (OECD), responsible for this worldwide assessment, sends a message about creativity's crucial role in today's world.

Although creativity has been gaining more and more attention in the last years, our current educational system is not conducive to creativity (Cohen, 2018; Puccio, 2017; Robinson & Aronica, 2016). Puccio (2017) argued that "recent educational practices have done more to promote student conformity than creativity" (p. 333). Makel (2009) called the creativity gap "the disparity between valuing creative performance in adults and not fostering creativity in students" (p. 38).

However, even with many limitations, it is possible to reduce this gap. Contemporary authors, such as Beghetto (2013, 2016, 2019), Burnett and Figliotti (2015), Cohen (2018), Resnick (2017), and Spencer and Juliani (2016), described different ways to incorporate creative thinking into schools. These strategies do not demand radical changes in the school system but rely on what Beghetto (2013) called "slight adjustments" to what is already done in schools. This content needs to reach educators.

Burnett and Smith (2019) stated

it is essential for creativity researchers to provide practical advice for teachers as to how they can build creativity into education. This means giving clear guidance on what educators need to know, what they need to do, and possibly how to do it. (p. 179)

In other words, it means providing appropriate creativity training to K-12 teachers.

### **The Need for Teachers' Creativity Training**

Sawyer (2019) highlighted that "most teacher education programs don't mention creativity at all, and most education textbooks don't tell teachers how to foster creativity" (p. 11). Makel (2009) stated that the schools of education's curriculum usually do not include a course in creativity. Burnett and Smith (2019) also informed that most educators' training usually does not include lessons on how to teach creative thinking. The reality in Brazil is not different. In a literature review, Nakano (2009) showed that Brazilian teachers are usually poorly prepared and unaware of creative learning strategies to promote creativity. Alencar et al. (2018) underscored that teachers receive minimal initial training in creativity in schools of education. Neves-Pereira and Alencar (2018) also argued that teachers do not receive the appropriate training in creativity and do not deeply understand their role in promoting creative teaching. Therefore, how do we expect teachers to teach something they have never learned?

It is not a surprise that teachers do not feel prepared to identify and promote creativity (Mullet et al., 2016) and mention they need help to incorporate creative strategies in their classrooms (Cachia & Ferrari, 2010). The need for appropriate creativity training for teachers is emphasized by many scholars (Alencar et al., 2018, Andiliou & Murphy, 2010; Burnett & Smith, 2019, Cachia & Ferrari, 2010; Mullet et al., 2016, Nakano, 2009, Neves-Pereira & Alencar, 2018).

Mullet et al. (2016) conducted a literature review about teachers' perceptions of creativity and found out that "teachers' conceptions of creativity were limited, vague, or

confused" (p. 27), differing from researchers' definitions. Therefore, creativity training needs to focus on a more in-depth understanding of creativity and to demystify some incorrect beliefs about the topic. According to Beghetto (2019), "one of the biggest hazards of trying to establish a creative classroom is basing it on an unclear understanding of creativity" (p. 12).

When teachers hold misconceptions about creativity, it is difficult for them to recognize and foster creative expressions in the classrooms properly (Kettler et al., 2018; Mullet et al., 2016) or even for them to believe they can teach creativity (Sawyer, 2019). Oliveira and Alencar (2010) argued about the importance of teachers getting a more in-depth understanding of creativity, supported by research. This notion is also supported by Mullet et al. (2016), who stated that "teachers need rigorous preparation and training that develops conceptions of creativity informed by contemporary theory and research" (p. 29). According to these authors' study, teachers who participated in training or professional development programs showed a "more mature and closer to researchers' definitions" understanding of creativity (p. 27).

Some of the topics and misconceptions about creativity that needs to be addressed in training are:

### **Creativity Is Not for Everybody**

Many people still associate creative people with eminent creators, focusing on Big C creativity. Some teachers still believe that creativity is a fixed trait limited to a few students (Alencar et al., 2016). When teachers believe only a few students are born with the "creative trait", they will not see developing creativity as their responsibility (Nakano, 2009). Moreover, they will not feel encouraged to fostering creativity in the classroom.

Teachers need to learn that creativity is not limited to a few people, and there are different levels of creativity. By understanding how everyday creativity can appear in the classroom, teachers will be able to recognize and value it (Burnett & Smith, 2019). They also need to learn that creativity can be intentionally taught and developed to understand the purpose of creativity training (Alencar et al., 2016).

### **The Art Bias**

Some teachers still believe creativity in schools is limited to the field of arts or artistic expressions. In Andiliou and Murphy's study (2010), for example, most teachers associated creative thinking with arts and humanities, and the examples of creative outcomes given by them were limited to artistic products. The belief that a creative outcome should always be expressed in artistic ways leads teachers to miss other great opportunities to open room for other creative manifestations in their classrooms. Moreover, teachers of non-art-related subjects might believe they are not responsible for fostering creativity. Teachers training in creativity need to highlight that creativity is transdisciplinary (Burnett & Smith, 2019), and it is possible to incorporate creativity in schools into all subject areas, including arts, but not limited to that (Baer & Kaufman, 2012; Beghetto, 2019, Burnett & Smith, 2019, Sawyer, 2019).

### **The Originality Hazard**

The standard definition of creativity includes two elements: originality and effectiveness (Runco & Jaeger, 2012). Beghetto (2019), when talking about creativity in schools, stated that creativity includes a combination of originality and meeting criteria (or task constraints) within a particular context. However, teachers sometimes see creativity as a synonym of originality or as doing something differently without a

purpose. In Andiliou and Murphy's literature review (2010), for example, teachers did not include the "appropriateness" component of creative outcomes. According to Beghetto (2019), failing to recognize the appropriateness component of creativity might lead teachers to associate creativity with "deviance, eccentricity, and disruptive behavior" (p. 15) and, therefore, avoid it. Lohiser and Puccio (2020) also described a "stigma toward creativity in education" (p. 1) because it is perceived as disruptive. Creativity training for teachers needs to start from a clear understanding of what creativity is in the classroom. According to Burnett and Smith (2019), the definition includes originality, usefulness, and appropriateness. It can be stated as "new thinking that adds to a student's understanding of a concept and relates to the topic being studied" (p. 186).

### **Choice Between Content and Creativity**

Considering the amount of content to teach, some teachers believe that they need to choose between teaching for the subject-area knowledge or teaching creativity. Torrance showed it is possible to teach creativity without leaving the content behind. His TIM model gives a framework for teachers to deliberately integrate creative skills into their teaching, along with other contents (Murdock & Keller-Mathers, 2008). More recently, other scholars also argued that teachers do not need to make a choice. Sawyer (2019) explained that, by using appropriate strategies, they could do both. Beghetto (2013) also underscored that teaching the content and teaching creativity is not contradictory but complementary. He even explained that when teachers notice the link between creativity and learning, they realize that creativity can help students better understand the content. As stated by Schreck (2009), creativity is "the vehicle for good

instruction" (p. 27). Therefore, creativity training needs to address the link between creativity and deep learning.

### **Creative Learning Environments**

Besides addressing some common misconceptions about creativity, creativity training also needs to show teachers how to organize learning environments conducive to creativity. Davies et al. (2013) conducted a systematic review of schools' creative learning environments from 2005 to 2011. They provide multiple elements that can guide the organization of learning environments, both physically and pedagogically.

According to them, the physical environment should be flexible, allowing students to move around and use their imagination. It should provide a wide range of materials, including new and different media, resources, and technologies. Students should have outdoor activities during their time in school and also activities outside the school, such as visits to art galleries and museums.

The pedagogical environment should allow students to work collaboratively with their peers and actively engage in their learning experiences, offering meaningful and contextualized activities. It is essential to provide the right balance between freedom and structure, allowing students to make some choices and have some control over their learning. However, teachers need to set clear expectations. Students should be encouraged to take risks and to explore and imagine in different ways. A playful or game-based approach, along with humor, is beneficial to the development of creative skills. Students should be allowed to work at their own pace without pressure, having extended periods to get immersed in their creative activities. The relationship between teachers and students should include mutual respect and time for dialogues.



In summary, it is essential to talk about creativity's definitions and misconceptions, and practices conducive to creativity, making this content available to teachers and using an easily understood language. Andiliou and Murphy (2010) argued about the need for "publications appropriately addressing practitioners' audience" (p. 217). Makel (2009) also highlighted the need for studies that teachers can easily apply in their classroom or "educationally relevant research" (p. 39), as he called. Developing specific creativity training for K-12 teachers is a great way to reach educators, giving them a more in-depth understanding of the concept of creativity and helping them design an environment and use pedagogical strategies conducive to creativity.

### **The Importance of Recognizing Teachers' Creativity**

Providing training for teachers to incorporate creative teaching strategies in the classrooms is essential. However, another element is also crucial if we want more creative schools: developing teacher's creativity. Kettler et al. (2018) showed evidence that teachers' personal creativity is associated with a more positive perception of students' creative characteristics. A study from Patston et al. (2018) explained that teachers who have higher self-assessed creativity levels are less likely to endorse creativity misconceptions, such as the art bias. Davies et al. (2014) stated that if teachers want to develop creative learners, they should model creative behaviors by holding a favorable attitude about creativity and feeling confident about their creative skills.

According to Patston et al. (2018), teachers' training needs to allow teachers to embrace and develop their creative skills. They stated that "to be effective teachers both for and with creativity, teachers must develop their own skills in creativity" (p. 372).

Davies et al. (2014) also highlighted that teachers' training needs to emphasize "enhancing teachers' creativity, self-efficacy, energy, risk-propensity, and leadership skills" (p. 40).

Researchers in Brazil also addressed the importance of focusing on teachers' creativity. Nakano (2009) highlighted the need to develop teachers' creativity, and Neves-Pereira and Alencar (2018) argued that teachers are better prepared to promote creativity in their classrooms when they are also engaged in developing their own creativity.

Recognizing teachers' creativity is so essential that Burnett and Smith (2019) considered it one of the points in the Five-Point Star Model, developed to incorporate creative thinking into the classrooms. The authors highlighted the need to involve teachers in identifying their own creative strengths to enhance their creative self-efficacy and further support their students' creativity.

Haydon and Harvey (2016) stated that "when working with creativity, we always start from a standpoint of strengths" (p. 23) and also pointed out that every person has her/his own unique creative strengths. Therefore, when we talk about taking into account teachers' creativity and their creative strengths, it also means recognizing and valuing the different ways teachers are creative. Spencer and Juliani (2016) explained how each creative type brings unique contributions and how schools benefit from this diversity. They stated, "when schools embrace all types of creative teachers, we are able to build the kinds of learning environments our students deserve" (p. 46).

By accepting that there is not only one way to be a creative teacher, we also help teachers recognize and value different students' creative styles.

## Creativity and Deep Learning

When schools teach for creativity, they are not only supplying a demand for creative thinkers. They are also promoting deep learning.

According to Armstrong (2010), in 2001, a group of professionals, including cognitive psychologists, instructional researchers, and testing specialists, revised Bloom's taxonomy and published a book called *A Taxonomy for Teaching, Learning, and Assessment*. One of the changes in this revision was placing "create" as the highest level of complexity of human thinking (see Figure 1). Puccio (2015) pointed out that educators should do everything possible to help students reach the highest level of thinking.

## Bloom's Taxonomy

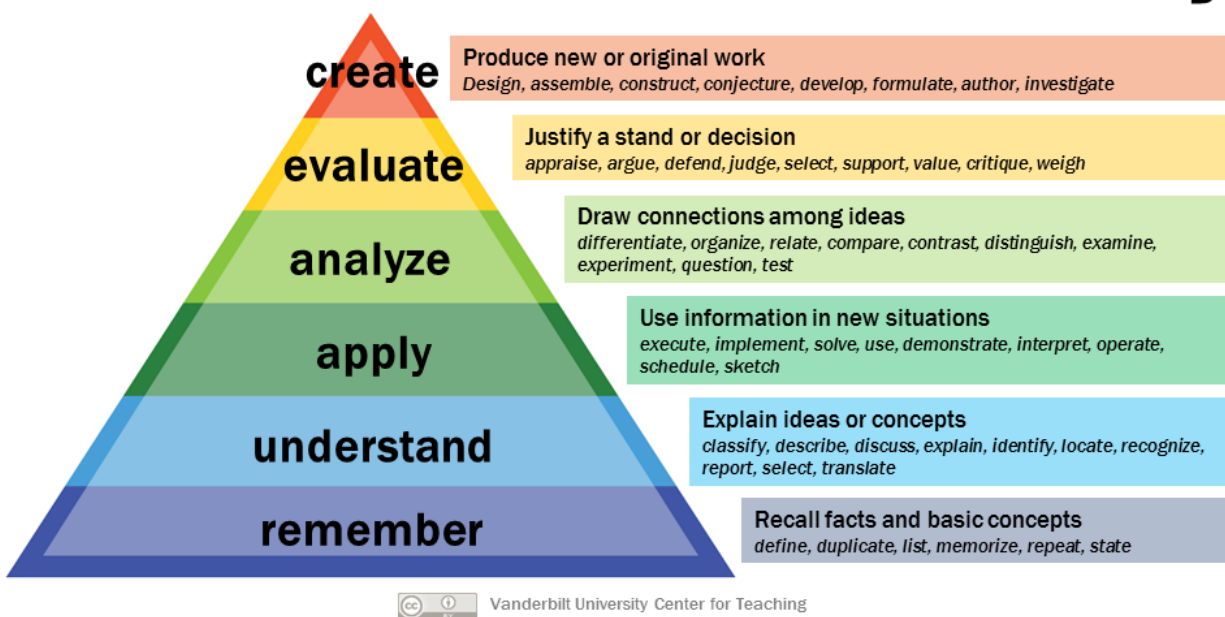


Figure 1 - Revised Bloom's Taxonomy (reproduced with permission granted by Creative Commons Attribution license - CC BY Vanderbilt University Center for Teaching)

Sawyer (2019) argued that most schools still use an ineffective pedagogy called "instructionism". Teachers deliver the content and tell students what they are supposed

to learn. Meanwhile, students try to memorize as much content as possible and then demonstrate what they have "learned" in a test. According to the author, this educational approach only teaches "shallow knowledge" or superficial facts and procedures. Students are only reaching the lower levels of learning in Bloom's taxonomy, and they are not learning in a way that encourages them to be creative.

Sawyer (2019) argued that creative knowledge, on the other hand, is deep knowledge (includes the understanding of principles and theories that provides context to shallow knowledge), big knowledge (involves a broad understanding of each subject), and connected knowledge (knowledge is connected to other contents within and across disciplines). In short, when teaching for creativity, teachers are also promoting deep learning.

### **Creativity and Well-Being**

There is, for sure, a need for creativity. Teachers need to incorporate creativity in their classrooms because they need to prepare students for the future and promote deep learning. However, these are not the only reasons why creativity is so important in schools. There is a third reason to promote creativity in education, but it is often forgotten. Acar et al. (2020) stated that, for humanistic and positive psychology, creativity is "a pathway to psychological well-being and self-actualization" (p. 2). In a recent meta-analysis study, the authors found a "significantly positive, yet modest, relationship between creativity and well-being" (p. 6).

Many years ago, Maslow (1943/2013) already wrote that the desire for self-fulfillment, described as the desire to achieve our full potential and become what we are capable of, was related to incorporating creativity into our lives. Baer and Kaufman

(2012) stated that "thinking creatively makes us more joyful, more interesting to ourselves and to others, more alive to life and its possibilities" (p. 9). Csikszentmihalyi (2013) said that personal creativity makes our experiences "more vivid, more enjoyable, more rewarding" and that "living creatively links us with the process of evolution" (p. 344). Moreover, Alencar (2007) underscored that the need to create is a healthy part of human beings. She explained that creative activities, followed by feelings of fulfillment and joy, are crucial elements for emotional well-being and mental health. Puccio (2015) also argued about the importance of creative behaviors to a mentally healthy life. These are different ways to show how a creative life is a healthier one.

Resnick (2017) also highlighted the value of creativity by saying that creative thinking has always been, and will always be, a central part of what makes life worth living. Life as a creative thinker can bring not only economic rewards, but also joy, fulfillment, purpose, and meaning. Children deserve nothing less. (p. 6)

I believe teachers do not deserve less than that too. Creativity is something we all need, but it is also something we all deserve.

Diehl and Marin (2016) conducted a systematic literature review to examine scientific articles published between 2010 and 2015, addressing symptoms and mental illnesses among Brazilian teachers. They stated that "teaching is one of the most stressful professions" (p. 64), and teacher's health is getting scientific relevance due to the increase of symptoms as anxiety, stress, and burnout. As a psychologist myself, I firmly believe that incorporating creativity in schools can positively affect teachers' and students' well-being.

Puccio et al. (2012) explained that living a creative life is about "seeing the world with new eyes" (p. 139). It is about imagining new possibilities, creating new options, seeing new opportunities, and, therefore, feeling more confident about overcoming challenges. Alencar et al. (2016) also argued that people who live creatively feel more comfortable dealing with the problems around them because they believe they can solve them. Nurturing imagination and creativity in schools allows rousing a form of power that belongs to everyone. As stated by Firestien (2020), "creativity gives you hope. And that is the most important thing in life" (p. 136).

That is why, according to Berg et al. (2020), there is a need to understand that creativity is linked to a person's well-being. It will help to "create a new pedagogical political system that promotes both skills and well-being" (p. 430).

### **Online Courses**

In the last decades, online education, a form of distance education in which the content is delivered using the internet, has increased tremendously and impacted K-12 schools, undergraduate and graduate courses, and professional training. Since 2020, due to the pandemic, online instruction has gained even more attention.

Online courses have lots of benefits. They can reach people in different geographic areas, offering time flexibility, more personalized instruction, and additional resources. However, it also has some challenges, such as creating a community of learners and promoting engagement and interaction. Carbajal (2015) highlighted the need to establish a sense of online community because isolation is one of the most significant online learning complaints. Letting students know they are part of a

community of real people helps them feel more connected and more likely to succeed in the online environment.

Creating an online course for personal development or professional training, in which learners choose to enroll and not necessarily are assessed, does not require the same strict guidelines as developing a course for K-12 schools or colleges. However, it is essential to follow some standards to provide the audience the best learning experience. Therefore, this section will include references from two documents: National Standards for Quality Online Teaching and Universal Design for Learning (UDL).

The National Standards for Quality Online Teaching, developed by the Quality Matters and Virtual Learning Leadership Alliance (2019), provides quality guidelines for online teaching and instructional design to states, school districts, and online programs. It includes eight categories:

- a) professional responsibilities - "the online teacher demonstrates professional responsibilities in keeping with the best practices of online instruction" (p. 8);
- b) digital pedagogy - "the online teacher supports learning and facilitates presence (teacher, social, and learner) with digital pedagogy" (p. 11);
- c) community building - "the online teacher facilitates interactions and collaboration to build a supportive online community that fosters active learning" (p. 13);
- d) learner engagement - "the online teacher promotes learner success through interactions with learners and other stakeholders and by facilitating meaningful learner engagement in learning activities" (p. 16);
- e) digital citizenship - "the online teacher models, guides, and encourages legal, ethical, and safe behavior related to technology use" (p. 19);

f) diverse instruction - "the online teacher personalizes instruction based on the learner's diverse academic, social, and emotional needs" (p. 21);

g) assessment and measurement – "the online teacher creates and/or implements assessments in online learning environments in ways that ensure the validity and reliability of the instruments and procedures. The teacher measures learner progress through assessments, projects, and assignments that meet standards-based learning goals, and evaluates learner understanding of how these assessments measure achievement of the learning objectives" (p. 24);

h) instructional design - "the online teacher curates and creates instructional materials, tools, strategies, and resources to engage all learners and ensure achievement of academic goals" (p. 27).

These standards emphasize the need for engagement and interaction, two key elements to make the learning experience more exciting and meaningful for students. To do that, it is also essential to follow the Universal Design for Learning (UDL) framework, created by CAST (2018). It includes three areas: representation (present information and content in multiple media), action and expression (allow multiple modes for students to express what they know), and engagement (stimulate students' interest and motivation for learning by giving choices). These guidelines help create learning opportunities that provide accommodation to the greatest number of students, making the learning experience more inclusive.

When reading these guidelines, it is clear that creating a quality online course is not an easy task. It is not recording a set of videos to deliver content to a large group of people. It includes much planning to use resources and create activities that will gauge



students' interest, promote their engagement, and develop a sense of community by offering opportunities to share experiences and interact with other students.

### **SECTION THREE: PROCESS PLAN**

When I completed my Philosophy Paper for CRS 635 (Creativity and Change Leadership) as part of my Master's degree, I had already established a goal to create an online course soon. Therefore, in the fall of 2020, I took an Independent Study about online courses in creativity in education. I took two courses (Going Beyond: Creativity in Education 2.0, taught by Cyndi Burnett and Ismet Mamnoon, and Learning Creative Learning, taught by Mitchel Resnick) and wrote a report for each of them, describing its framework and syllabi. Both were introductory courses for teachers, targeting the same audience I want to reach. So I reviewed these reports to help me organize my framework. During the J-term, I took another Independent Study about creativity in education in Brazil because I knew my online course's target audience would be Brazilian teachers. So I wanted to have a panorama of the Brazilian scientific production in the field. Therefore, I can not describe my process plan without referring to some of these previous activities. They helped me to envision the type of online course I wanted to create and to see the resources that were already available in Portuguese.

#### **How I Plan to Achieve My Goals and Outcomes**

This project's primary deliverable is a framework for an online course about Creativity in Education offered in Portuguese to K-12 teachers. This framework will further guide me to create and launch this online course.

To accomplish this goal, I started by reviewing the literature in the field of creativity in education. I included previous readings I have already completed for my Philosophy Paper assignment for CRS 635 (Creativity and Change Leadership), for the Big Question Paper assignment in CRS 625 (Current Issues in Creative Studies), and

the Independent Study about Creativity in Education in Brazil. My literature review focused on the increasing need for creativity in education (to justify the idea of the online course about this topic) and some specific aspects to be addressed in teachers' creativity training (to help me define the content of this course).

To design the framework for the course, I will contact some teachers I have already worked with to ask them about their expectations about an online course on creativity. I will then create a summary of their expectations/needs. I want to make sure my course addresses most of the teachers' needs, especially regarding the course structure (length of videos, preferred resources, and interactions). I will review my notes from the courses I took from the Virtual Teacher Program Specialization (VTPS) and create a list of best virtual learning practices to increase learners' engagement/learning. I will also review the two reports I wrote for my Independent Study about Online Courses in Creative Education (OCCE) to summarize the best practices I found. These three pieces (summary of teachers' expectations, VTPS best practices, and OCCE best practices) will be additional outcomes of this project and will guide me to design a draft of a framework for my course.

I will show this draft to the same group of teachers and my sounding board partner and ask them to provide specific feedback. I will make some revisions in my draft to create the final version of the framework, which will be my deliverable for this Master's project.

Table 1 presents a project timeline.

**Table 1. Project Timeline and Action Plan**

Date/Period	Activity	Hours to Complete	Support Needed
01/04/21	Class Meeting - Orientation about projects	1h	Dr. Susan Keller-Mathers
01/05/21	Meeting with Sue - Master Project Idea	1h	Dr. Susan Keller-Mathers
01/06/21 - 01/17/21	Write Concept Paper	20h	
01/18/21	Concept Paper Draft Submission		
01/18/21- 02/15/21	Revise Concept Paper	8h	Dr. Susan Keller-Mathers
02/01/21 - 02/05/21	Review Virtual Teacher Program Specialization (VTPS) notes to create a summary of best practices	6 hours	
02/01/21 - 02/05/21	Review online courses in Creative Education (OCCE) notes to create a summary of best practices	4 hours	
02/01/21 - 03/15/21	Write Sections 1-3	20 hours	
02/08/21- 02/12/21	Meeting with teachers about expectations and needs (2 groups)	4 hours	Members of Coletivo Descola

			& Coletivo Kriativo
02/15/21	Concept Paper Submission		Dr. Susan Keller- Mathers
02/15/21- 02/19/21	Write summary of teachers' expectations/needs	2 hours	
02/15/21- 02/19/21	Cluster suggestions (VTPS best practices, OCCE best practices and teachers expectations/needs)	6 hours	
February/21	Submit project to Sounding Boarding Partner (SBP)	1 hour	Sounding Board Partner (Cyndi)
March/21	Review Sounding Boarding Partner (SBP) suggestions	1 hour	Sounding Board Partner (Cyndi)
02/15/21- 03/12/21	Develop draft of framework	16 hours	
03/15/21	Sections 1-3 Draft Submission		
03/15/21- 03/19/21	Meeting with teachers and SBP to get feedback from framework draft	4 hours	Members of Coletivo Descola & Coletivo Kriativo + SBP
03/22/21	Sections 1-3 Submission		
03/22/21- 04/03/21	Revise framework	20 hours	

03/22/21- 04/10/21	Write Sections 4-6	16 hours	
04/12/21	Section 4-6 Submission		
04/19/21	Entire Document Draft	10 hours	
04/26/21	Final revisions	3 hours	
04/28/21	Entire Document Submission		

This project will be evaluated by completing each step necessary to the final measurable deliverable (online course framework). Table 2 presents the steps.

**Table 2. Key Evaluation Assessments**

Date	Activities	Estimated Time
02/15/21	Concept Paper	30 hours
02/28/21	Virtual Teacher Program Specialization Best Practices (summary)	6 hours
02/28/21	Online Courses in Creative Education Best Practices (summary)	4 hours
02/28/21	Teachers' Expectations/Needs (summary)	6 hours
03/05/21	Draft of Online Course Framework	16 hours
04/12/21	Final Online Course Framework	20 hours

I plan to get feedback for my framework from two different teachers' groups (Coletivo Descola and Coletivo Kriativo). The first one is a group of teachers I meet every week, and it is composed of High School and College teachers. The second one

is a group of teachers who took a study group with me last year, and it is composed of eight teachers (Pre-School, Elementary, and Middle School).

I also plan to get feedback from my sounding board partner. Cyndi Burnett has extensive experience in creativity in education and is the instructor of one of the online courses I took. She has expertise in the topic as well as in designing online courses. Therefore, her contributions will be precious.

I also plan to write some notes about my process, challenges, adjustments, and feelings. It will help me to reflect on my journey and my learning in this project.

## **SECTION FOUR: OUTCOMES**

### **Introduction**

My goal for this project was to design a framework for an online course on creativity in education. To do that, I reviewed the literature on the field, analyzed online course best practices, examined the framework of two online courses on the area, and solicited initial input from some teachers about their needs and expectations.

The outcomes of this Master's project include three summaries on best practices on online courses, a list of teachers' expectations and needs about this training, and the framework for the online course. Each of these are described in this section.

### **Best Practices - Virtual Teacher Program Specialization**

In 2015, I completed an online certification called Virtual Teacher Program Specialization. Before designing the framework for my online course, I reviewed my notes from the courses I took for this certification and created a document called Best Practices - Virtual Teacher Program Specialization (Appendix B). It highlights some essential aspects when designing an online course. It includes eight points: the sense of community, communication, differentiated instruction, multiple means of representation, length of lessons, virtual classroom design, students' motivation, and specific suggestions.

This document helped set some critical guidelines for my course. For example, after reading about the importance of creating a sense of community, I decided to include one specific activity for introductions on Module 1. I also included synchronous meetings during the course and activities in which learners interact in the discussion forums in all modules. When learning about the Universal Design for Learning (UDL)



and the multiple means of representation, I decided to include the videos and some visual materials (infographics or mindmaps) and some additional resources, such as articles or books.

Since 2015, when I completed the Specialization Program in Virtual Teacher, online education evolved. Therefore, I also examined more recent literature, such as the National Standards for Quality Online Teaching, updated in 2019. I noticed that the information from the course I took in 2015 is still relevant and current. The best practices I summarized are not related to the use of resources or tools that can become obsolete but focuses on aspects that are always important for good teaching, such as creating a sense of community and getting students engaged.

### **Best Practices - Online Courses on Creativity and Education**

In 2020, I took an Independent Study in which I wrote a report about two online courses I took on creativity and education. I reviewed this report and created a new document for each of them, summarizing the best practices I found in each of the courses and ideas I could get inspired on. The document includes five points: structure (specific details about how the course is structured), content (topics included in the course and ways the content is delivered), practice and reflections (activities in which learners do hands-on activities and reflect on their practices), interactions (how the course creates a sense of community) and general highlights (other things I liked about the course).

The documents Best Practices - Going Beyond: Creativity in Education v 2.0 (Appendix C) and Best Practices - Learning Creative Learning (Appendix D) helped me define some strategies I could use in my online course. For example, the course Going

Beyond: Creativity in Education v 2.0 asked participants to sign a Creative Commitment at the beginning of the course. Inspired by this idea, I decided to include a similar activity in my online course's first module. The course Learning Creative Learning focuses a lot on the process instead of on the final product, and I enjoyed the type of questions they asked participants to answer. Therefore, I will include some of these questions in the discussion forums to help learners go deeper into their reflections.

### **Teachers' Expectations and Needs**

Before designing the framework for my online course, I had two online meetings with two groups of teachers to get some input from them about their expectations and needs about an online course. Since I am designing this course for teachers in Brazil, I met with ten K-12 teachers and two college professors. These teachers already had experience in teaching. They do not have any formal training in creative education, but they all took an online course about personal creativity and were interested in the topic. They all attended some lectures, workshops, or book clubs about creativity in schools that I organized last year, so creative education was not entirely new for them. I asked them about preferences on recorded videos or live sessions, the amount of weekly time they could commit for an online course, the type of activities they prefer, any content they wanted the course to address, along with other questions. I summarized this information in a document called Teachers' Expectations and Needs (Appendix E).

### **A Framework for an Online Course on Creativity**

After reviewing the literature and reading Appendices B to E, I started designing my online course framework. I decided to organize the course content around some questions - why, what, who, where, when and how (5W1H) about creativity in education.

That way, I included all the content I wanted to cover aligned with the needs depicted in the literature review. I then created the Draft Framework (Appendix F). I submitted this framework to the same teachers I asked for input. After getting some feedback from them, I came up with the framework's final version (Appendix G).

The framework has two main parts: syllabus and schedule. In the final framework, I also included a list of resources.

### **Syllabus**

The course content includes topics identified in the literature review as essential in creativity training for teachers, such as understanding the importance of creativity, exploring creativity definitions and misconceptions, recognizing teachers' creativity, building creative learning environments, and exploring ways to incorporate creativity with the content. These topics generated six questions (the 5W1H of creativity in education), around which the course was structured. Why does creativity matter? What is creativity? Who is creative? Where creativity flourishes? How to promote creativity in schools? When teaching creativity?

I designed an 8-week course with eight modules. Module 1 is a course orientation in which learners will get to know the course instructors, explore the course's framework, learn how to get the most out of the course, get their Creative Journal and sign a Creative Commitment. Modules 2-7 address the six questions (why, what, who, where, when, and how) I listed above. Module 8, the final one, is about creating strategies to keep learners engaged in promoting creativity in schools after the course is completed. In this module, learners will have access to the Creative Teachers Bill of Rights to spread the creative teachers' rights.

**Schedule**

The course's schedule exhibits the content that is delivered each week. It also outlines the live sessions' dates.

**Resources**

This section was included in the final framework. Besides the recorded lessons, the course will also provide additional resources, such as articles, books, TED Talks, videos, and websites to extend the learning. The list of additional resources is at the end of each module as optional activities.

**Revisions**

There was no significant change from the draft of the framework to the final framework regarding the content and structure. When I asked teachers to provide feedback on the draft of the framework, overall, they liked the course structure and how it was organized around the 5W1H questions. They also liked the content, but they wanted more specific details about the teacher's engagement in the course (hands-on activities, reflections, and interactions in the discussion forums).

One teacher suggested moving the activity where teachers provide their own definition of creativity (on module 3) to the course's last module. That way, teachers would have more time to build their definitions. I decided to keep the definition on module 3 because, according to the literature, it is essential to have a clear understanding of what we mean by creativity to promote it. However, considering her suggestion, I decided to include an activity in which teachers can review and expand their definition at the end of the course to show it is a process that can change and

evolve. After listening to teachers' suggestions, I also made some minor changes in the wording.

The final framework includes a detailed outline of the course, depicting the activities for all modules (each video, activity, and topics to be discussed in the forums, along with the additional resources that will be offered). Due to proprietary reasons, the whole course's final framework will not be included in this project. I will include only two modules as an example of how the final framework was organized (Appendix G).

### **Learners' Evaluation**

The framework does not include a section about evaluation yet. The three online courses I took on creative education (Going Beyond: Creativity in Education v 2.0, Learning Creative Learning and Creative and Critical Thinking in Schools) included non-mandatory activities for learners to complete (such as reflections and posts on discussion forums). There was no type of formal assessment or grades. Therefore, this is a topic I still need to decide how to address.

## **SECTION FIVE: KEY LEARNINGS**

### **Introduction**

I always believed that, in education, the process is as important as the final product. Therefore, reflecting on my process during this project and being more aware of what I learned so far is valuable. This project offered many key learnings, both personally and professionally. I will share some conceptual learning and some reflections about my creative process.

### **Content Learning**

In regards to content learning, I was able to gather essential information about the field of creativity in education. My literature review provided substantial support to the need to incorporate creativity into education both in the USA and in the Brazilian context based on recent reports and research.

I also learned about specific topics to include in creativity training for teachers that will guide me in this online course and future workshops and courses. I see myself much more confident now to talk about the need for creativity in education and teach some strategies that teachers can use to do so.

By organizing the course content around the 5W1H of creativity in education, I understood creativity more comprehensively. Module 2 (Why) helped me define why I should advocate for creative schools by underscoring three strong reasons why creativity is essential: 1) prepare students for the future, 2) foster deep learning, 3) and promote emotional well-being. In module 3 (What), I realized that, even though creativity is a known word, it is crucial to spend some time defining it and talking about some misconceptions to build a shared definition about the creativity we want to promote in

schools. When designing module 4 (Who), I realized I could use it not only to talk about different ways people are creative but to value teachers' creative strengths that they might not be aware of. In one of the previous courses in this program, when I learned about Appreciative Inquiry, I loved this model's positive approach. I plan to use it when creating the lessons of this module. Module 5 (Where) helped me dig into two comprehensive studies with lots of suggestions for educators who want to design learning environments that support creativity. Module 6 (How) helped me understand there is no unique way to promote creativity in schools. Therefore, I decided to offer teachers the chance to explore different options, such as the 4Ps of Creative Learning, Design Thinking, Creative Thinking Skills, and TIM Model. When designing Module 7 (When), I noticed I needed to show teachers that creativity is not taking time off the content. It can be taught simultaneously because teaching the content and teaching creativity are complementary tasks. Finally, in module 8, I noticed I needed to help teachers keep engaged because sometimes promoting creativity in schools is a solitary and challenging task.

Since I have not recorded the lessons yet, I do not have any technical knowledge that I achieved to include in this section. However, as soon as I start recording, editing, and adding subtitles, I will have plenty of new learnings regarding the tools I will use.

### **Process Learning**

When I started this project, I created a list of all the things I had to do to create the course. I wanted to do everything possible to launch it as soon as possible. However, considering the time I had to work on the project and my previous experience designing an online course, I knew I would not be able to complete everything in less

than three months. Therefore, I needed to think about the most important thing I wanted to accomplish in this timeframe. I decided I wanted to focus on creating a great framework. "Highlight the Essence" is a creativity skill originally described by Torrance. I used it a lot during this project due to the time I had to accomplish it. This skill is about identifying what is essential in a specific context, distinguishing between relevant and irrelevant information, and establishing priorities (Torrance & Safter, 1999; Burnett, & Figliotti, 2015).

Being aware of my preferences in the creative process also helped me to be deliberate in my actions. When I started selecting each module's contents, I started having lots of ideas for the videos, infographics, and mindmaps. I love to ideate. I get very energized when I have some original ideas, and I knew I could spend hours just thinking about the pictures I could use to create an animated video. However, the focus of that moment was to have a big picture of each module and not a detailed script for each lessons' videos. Therefore, I grabbed some post-its and started writing down these ideas to remember them and then focused on my goal for the moment.

I also needed to use the creative skill of "Elaborate, but Not Excessively". I needed to think about all the details I wanted to include in my draft framework to make it easy for teachers to understand it and provide feedback. However, I should not add so many details that I would spend more time than needed in this phase. I can see now that it was essential to find a balance between valuing my ideas and recording them for later use and focusing on the moment's need by spending appropriate time in each phase.



A key learning I had was about co-creation. My initial idea was to offer this course in an entirely asynchronous way. However, after meeting the teachers for the first time, I realized that having some live sessions was an essential feature of a great course for them. Teachers wanted access to the course content and the flexibility to watch the videos whenever possible for them. However, they wanted the chance to talk to the instructor, ask questions, exchange ideas, and share experiences. If I did not ask for their input before designing the framework, I would never think this was essential. It reminded of Design Thinking that always start with a moment to look at people's need. As stated by Cohen (2018), "The reason empathy is so valuable as a start of any process is because it places emphasis on people rather than product" (p. 78).

Another key learning I had in this process was to be very specific when asking for feedback. When I met the first group of teachers to ask for feedback about the framework, I showed them the Draft of the Framework (Appendix F) and asked them about their thoughts on the course structure and content. They told me they liked the course but asked for precise information that I had not defined yet, such as the day of the week and the time for the synchronous meetings, and the course's cost. One of the teachers started asking how much the course would cost, saying that not all teachers could afford it if it was too expensive. Although this is a crucial aspect to consider when I am ready to sell the course, this was not the meeting's focus. I wanted them to examine the content of the modules and the types of activities and resources. I was able to value her concern and redirect the group to talk about these aspects. However, when I talked to the second group of teachers to ask for their feedback, I decided to be

more specific and wrote down all the questions I wanted them to answer about the course.

Overall, creating this online course framework was an exciting journey that provided me lots of learning. I am pleased to see that the goals I wrote in Section 1 are going to be achieved. I gathered relevant literature on creativity and education to support my interventions as a Creative Education Consultant. I have a great starting point to create an online course about creativity in K-12 education for Brazilian teachers. It will help me widen my portfolio of services in the field of creative education and become a change leader in creative education in Brazil.

## SECTION SIX: CONCLUSION

When I started learning about creativity in education, I remember reading reports such as *The Future of Jobs* (World Economic Forum, 2016) and thinking there is a need for creativity. I do not doubt there is an urgent need to prepare students as creative thinkers. Schools play a significant role in this task. However, the more I learn about creativity, the more I believe it is much more than a need. I have been saying that creativity is something we all need but also something we deserve.

Resnick (2017) stated that creativity is "a central part of what makes life worth living" (p. 6). It is a powerful statement. We all need and deserve a life worth living. Living a fulfilled life with purpose and meaning is linked to well-being and mental health. As a psychologist myself, this is something I want to promote. I know lots of educators in Brazil who were dealing with anxiety and depression before the pandemic. Since 2020, I am sure these numbers went up.

We know the traditional school system, focused on standardized tests, can "kill" students' creativity. As Sternberg (2015) argued, a multiple-choice test leaves no place for creativity. However, it can also destroy teachers' creativity. Beghetto (2010) showed that teachers feel pressured to teach students to "find the right answer" when focusing on standardized tests. Sometimes, they even narrow their content to do that instead of teaching the content in a meaningful way because they need to deliver much content in a small amount of time. Pressure, fear of not preparing students well, intolerance to original ideas, lack of joy and creativity, fear of risk-taking are all part of the scenario for most K-12 teachers when they are not allowed to be creative. If we are not taking care of educators' well-being, it will be difficult for them to promote their students' well-being.

When I talk about nurturing creativity in schools, I want better schools for students, teachers, school administrators, and the whole community. I am sure a creative school is a healthier school for all. That is why, after working on this project, I am even more convinced that this is what I want to do: help schools prepare students for the future and promote deep learning and well-being. I want to work on that and spread the word about why a creative school is the only choice for a better future.

### **Next Steps**

When I started this project, I already knew this was just the first step for creating an online course. Now that I have designed the course framework, I will write a detailed outline for all lessons and record them. I will use all the ideas that I had during the process to help me make the course interesting and engaging. I will then offer it to teachers in Brazil.

One of the things I know I need to work on is my ability to "sell" my products/services. I love to create, but promoting my work was always a challenge for me. Therefore, I started a marketing course on Instagram to learn more about ways to show the products/services I am developing. It was one of the topics I put on my strategic plan for the Creativity and Change Leadership course. So far, I plan to start building a community of educators that might be interested in my services. Later, I will probably ask for professional help to create a more robust website and a comprehensive marketing plan.

When reviewing the literature for this project, it became clear for me the essential role of creative leaders in education. Schools that are doing a great job of promoting creativity are relying on creative leaders. Sternberg (2015) argued that significant

transformations at the national or international level in education are limited to "contexts where transformational leaders encourage change and are able to overcome resistance" (p. 117). Therefore, I see myself focusing on creative leadership training for educational leaders in the future. Maybe I will create another online course targeting this audience. I believe this can be a crucial element to promote the change I want to see in schools.

During the process of writing this project, I also published a book in Brazil called *Criatividade Contagante - Como a escola pode nutrir o pensamento criativo* (Creativity is contagious - How schools can nurture creativity thinking), launched on April 21, World Creativity Day. It was exhausting to work on two significant goals of my professional life simultaneously, but it was also rewarding. I have already been giving workshops to educators. Now I have a book and soon an online course on creativity in schools. I firmly believe the more options teachers have to learn about creativity, incorporate it into their practice, and fall in love with it, the better.

In Section 1, I said I wanted to become a creative education leader in Brazil. Although I am not living in Brazil anymore, my home country has lots of challenges in education, and I want to help it in whatever way possible. However, I also want to find ways to do that in the USA. Last year, I started collaborating on the platform Creativity and Education, and I plan to keep writing posts to it. I also plan to see other options to work on projects or even schools in the USA. Again, I am passionate about creativity in education, and I want to promote creativity in schools in all countries possible.

I am glad of the process and outcome of my project. I am also excited about my future. As said in Section 1, I started this Master's Program trying to find answers to the

question: "What might be all the ways that I can help teachers and school administrators to bring creativity to schools?" This is my final assignment in this Master's Program. I am confident I achieved my goal of finding some answers to the questions that led me here. After completing this project, I see I am widening my portfolio of services in the field of creative education and, therefore, getting prepared to become a change leader in creative education.

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## APPENDICES

## APPENDIX A

### Report Creativity in Education in Brazil

By doing this report, I had a more in-depth understanding of the field of creativity in education in Brazil. It was interesting to learn how two scholars, Dr. Eunice Alencar and Dr. Solange Wechsler, who got their Ph.D. in the '70s and '80s in the USA, brought new ideas to their country. They created a massive impact in the field by conducting innovative research, publishing several books and articles, and advising graduate students. Therefore, they helped begin and grow the studies in the field and made it one of the most vital areas in Brazil's studies of creativity. Nowadays, most of the research in the field is concentrated in the two institutions where they worked.

The field of creativity in education in Brazil produced several empirical research and papers published in national and international journals, mainly by the two prominent scholars and their pupils.

Although there are articles and books in the area, it's interesting to notice that one of the points brought by the study of Alencar et al. (2018) is the lack of knowledge about practices that promote creativity and ignorance of articles and books about creativity in the classroom. Therefore, I realized that conducting research is not enough. We need to conduct "educationally relevant research" or studies that teachers can immediately apply in their classroom, as mentioned by Makel (2009, p. 39). The knowledge required to support creativity in schools needs to go beyond academic scholars and reach teachers and school administrators. Since my Master's Project plan is to create an online course about creativity in education for teachers, I can say that there is definitely a need for that.

When reading some of the Brazilian articles produced in the last 20 years, I noticed they are well aligned with other recent articles and books published in the USA. The importance of creativity in education is well addressed in many papers (Alencar & Fleith, 2008; Alencar et al., 2018; Nakano, 2009; Neves-Pereira & Alencar, 2018) along with creativity as an essential survival skill (Neves-Pereira & Alencar, 2018, Oliveira & Alencar, 2010). The urgent need for appropriate training for teachers (Alencar et al., 2018, Nakano, 2009; Neves-Pereira & Alencar, 2018) and leaders (Alencar et al., 2018) is also

underscored. Some Brazilian authors mentioned the lack of focus on creativity in schools of education and the need to reformulate its curriculum (Alencar et al., 2018; Nakano, 2009; Neves-Pereira & Alencar, 2018; Oliveira & Alencar, 2010; Souza & Alencar, 2006). Some Brazilian authors also mentioned the importance of a more in-depth understanding of creativity, supported by research (Oliveira & Alencar, 2010) and not based on misconceptions such as creativity as relying only on intrapersonal factors (Nakano, 2009). They also highlighted the importance of teachers developing their own creativity (Nakano, 2009, Neves-Pereira & Alencar, 2018). It was interesting to notice that Brazilian authors are also creating some instruments to assess creativity in schools, especially the climate for creativity in the classroom and the barriers to fostering creativity, allowing for more empirical research to be produced.

I also learned about Alencar's model for the development of creativity that has guided most of her training and includes intrapersonal and interpersonal aspects. The model is depicted in a pentagon shape, including five factors.

The factors are:

- 1) personality traits associated with creativity (such as curiosity, self-confidence, persistence, tolerance for ambiguity) that need to be nourished;
- 2) cognitive abilities such as divergent thinking skills,
- 3) domain knowledge and creativity techniques;
- 4) reduction of barriers to creativity (such as fear of making mistakes and fear of being judged);
- 5) psychological climate that supports creative expression by encouraging new ideas, supporting original ideas, inviting creative actions, and having high expectations regarding people's creative potential (Alencar, 2007; Fleith, 2011).

I will consider some of these elements when designing my online course for Brazilian teachers and even include some additional resources, such as Eunice Alencar's books, to extend the learning. I will also consider the five points brought by Neves-Pereira and Alencar (2018) as necessary to promote creative teaching.

Since I plan to work with creativity in education in Brazil, the opportunity to research Brazilian authors in the field was valuable and essential. It was a way to get in touch with my home country's production in the area and learn about scholars/institutions I can



contact in the future. Moreover, by acknowledging what has been produced in Brazil, I can start my Master's project from a strength-based approach.

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## APPENDIX B

### Best Practices - Virtual Teacher Program Specialization

#### Sense of Community

- You need to establish a sense of online community. Isolation is one of the most significant complaints of online learning. Letting students know they are part of a community of real people helps them feel more connected and more likely to succeed in the online environment.
- If you are having synchronous meetings, the interactive "rule of thumb" is to ask participants to interact every 3 to 5 minutes or after 3-4 slides.
- Allow students to ask questions and share their reflections.
- Use questions to create engaging discussions by allowing multiple interpretations, examples, and evidence from research. Encourage more profound thought through posting additional questions and resources.
- Consider at least some synchronous activities (they help solidify concepts, provide different perspectives and connect students and teachers).

#### Communication

- Set clear expectations around your availability and stick with them (when and how you will communicate with students). You should not be available 24/7, but they need to know how to find you.

#### Differentiated Instruction

- Universal Design for Learning (UDL) recommends educators design learning environments characterized by three types of flexibility and alternatives: multiple

ways in which content is presented, multiple modes for student expression, and multiple means for engaging student interest. It's essential to create learning opportunities that provide the greatest possible accommodation to the greatest number of students.

### **Multiple Means of Representation**

- Present content in different ways (video, audio, slide show, reading materials). Consider accessibility options (closed captions, translation for non-native speakers). Include graphic representations, such as concept maps and graphic organizers, and illustrative representations, such as diagrams and simulations, for visual learners.

### **Length of Lessons**

- Think about the length of each task. Break up the experience as much as possible using images, questions, and short videos.
- Get inspired by vloggers - get into people's faces (closer to the camera) and bump up the energy level (gesticulate, use emotions, talk louder and fast). Make 4-6 min videos, break down subjects into small units, and create multimedia videos.

### **Virtual Classroom Design**

- Always consider the design perspective of the learning environment. What elements will I bring into the environment to best facilitate the learning experience that my students will have?

### **Students' Motivation**

- Consider the three keys of motivation: autonomy (give students choices), mastery (ask students to do something that they can get better at it by doing it over and over again), and purpose (ask students to do something that matters to them).

### **Specific Suggestions**

- Use storytelling - incorporate stories because they help us remember, make learning sticky, activate our imagination, and set the stage for creativity and critical thinking.
- Use games - introduce fun to the learning experience by creating a puzzle that will be completed with each module or doing scavenger hunts (in which students have to go collect and share some resources).
- Use QR codes that unlock additional content, activities, or resources.
- Consider providing digital badges. They can give the students virtual displays or recognition of completing tasks or acquiring skills and encourage students' progression through work.
- Do things differently - for example, create an interactive syllabus in which you communicate with texts and visually (like an infographic – using images, quotes, graphics).
- Use Pinterest as a way to collect visual ideas into a board collaboratively. It's possible to create group boards.

## APPENDIX C

### Best Practices - Going Beyond: Creativity in Education v 2.0

#### Structure

- User-friendly platform (Ruzuku) - it is easy to visualize all the content and to keep track of what is already completed
- Same structure for each module (easy to follow)
- Set expected time to complete each module
- Start each module with why
- Short videos with subtitles
- Short texts (easy to read and follow)
- Animated PPTs blended with video
- Neutral background while presenting (allows adding text if needed)
- Slides available for download (clean slides)

#### Content

- It allows educators to understand and apply creativity
- Emphasis on embodying creativity, helping teachers to reflect on their creative style, and model the way
- Lessons are easy to understand and are appropriate for teachers of different grade levels
- Set the purpose of each module
- Provide additional resources to read

## **Practice and Reflections**

- Lots of suggestions of activities that teachers can try in their classrooms
- Build a list of options about how to integrate creativity (diverge) and then select one to explore
- Reflections on the experience (debrief of the lesson)
- Guide an activity with the option to pause the video
- Reflect on creative learning experience (what worked well) and practice with ideas suggested by other teachers
- Recognize teachers are already being creative and build on this experience
- Reflect on the personal problem-solving process (make it personal)
- It includes a self-assessment and is very specific about challenges, guiding learners on how to become more creative

## **Interactions**

- Learners are encouraged to try out activities and share the outcomes in the discussion forums
- Practice with ideas suggested by other teachers.

## **Highlights**

- An accountability buddy for sharing discoveries and insights
- Creative Commitment (we invite you to be open/curious/flexible)
- Ask participants to explain why creativity matters to them and include stakeholders (make it personal)
- COS (Creative Operational System) activities (scan, debrief, and challenge)

## APPENDIX D

### Best Practices - Learning Creative Learning

#### Structure

- It allows learners to take the course with or without a cohort.
- It offers subtitles and reading materials in different languages.

#### Content

- The content of each module is well described.
- It offers lots of additional resources (such as articles, interviews, videos) to extend the learning during the modules and at the end of the course.
- It includes a summary of each video and readings.

#### Practice and Reflections

- Create a connection with something personal (childhood object).
- Learners are encouraged to engage in hands-on activities, reflect on their experience and share the outcomes/reflections in the discussion forums.
- There is an emphasis on engaging participants in creative learning themselves.
- Learners are required to create some projects during the course, but they can choose the materials and media they want to use - open tasks (project/insights) to model diversity.
- It suggests reflections on how the thinking evolved during the journey and suggestions to think on how they can use the learning in the future.
- There are questions about how participants can use some ideas in the classroom -  
What are some of the design choices or facilitation strategies you already use or

plan to use to widen the walls? What are some of the design choices or facilitation strategies you already use or plan to use to promote a playground-style play?

### **Interactions**

- It includes Meet and Chat (weekly meetings for discussions) when taken in a cohort.
- It focuses on creating a community of learners.
- It has activities in which learners need to build upon other ideas (remix activity).
- Asking learners to share a picture and description of the object (week 1) made the discussion forums more exciting.
- It promotes connections between participants.
- Discussion forums are available to read even if you are taking the course without a cohort.

### **Highlights**

- Activity - I used to think... but now I think (it shows it's okay to change your mind)
- Focus on the process of doing the project instead of on the final product
- Questions about the creative process - How did you get the idea? What was a challenge you encountered? What would you do if you had more time? What motivated you to create your project? Can you describe a moment of joy or frustration? What helped you persist in the face of challenges? What inspired you about the original project? What did you change, and why?



## APPENDIX E

### Teachers' Expectations and Needs

#### Structure

- Hybrid approach (recorded lessons + synchronous meeting)
- Live sessions every week or every other week (1h30/week)
- Flexibility to watch recorded lessons
- Live sessions at the beginning or end of each module
- Date to start/end - people don't procrastinate
- Calendar with weekly activities
- Set estimated time to complete each module
- No more than three months (2 months weekly meeting or three if every other week)
- Estimated time - 40-60 for certification (classes + activities)
- Certification even if not valid for promotions
- If too long, people can give up

#### Content

- Visual summary (mindmaps)
- Questions teachers want to get some answer for - How to be creative in schools?  
How to be creative and inspire students to be creative too? How to be creative in the whole school? How to create a culture of creativity?
- Examples of schools that are being creative (case studies)
- Historical perspective (prominent scholars in the field, context)
- Different formats to not get bored

**Practice and Reflections**

- Real problems to solve
- Activities to do before live sessions (so they can discuss outcomes)
- Opportunities for teachers to share their activities (they like to "brag")
- Value teacher's achievements

**Interactions**

- Include an opportunity to ask questions, share experiences, discuss techniques
- Create a community (Facebook, Telegram)
- Possibility to ask questions for the instructor (individualized attention)
- Live with participants
- Small groups (no more than 40 students)

## APPENDIX F

### Draft Framework for Online Course

#### Building Creative Schools

This course is a resource for educators who are interested in promoting creativity in their classrooms. It is designed around six questions (the 5W1H of creativity in schools). Why does creativity matter? What is creativity? Who is creative? Where creativity flourishes? How to promote creativity in schools? When teaching creativity?

The course has eight modules. Module 1 is a course orientation. Modules 2-7 address the questions above (5W1H). Module 8 suggests strategies to keep learners engaged with creative teaching and learning after the course is completed. Along the path, learners will have access to recorded videos, live sessions, visual materials (infographics and mindmaps), guided activities, discussion forums, and additional resources (articles, book chapters, books, videos) to extend the learning.

This course aims to help educators get a more in-depth understanding of creativity, recognize their own creativity, and show different options to promote it in schools. It also hopes to create a community of creative educators who can share experiences and support each other.

#### Syllabus

##### Module 1 - Course orientation

In this module, learners will get to know the course instructors, explore the course's framework, learn how to get the most out of the course, get their Creative Journal, and sign their Creative Commitment.

**Module 2 - WHY - Why does creativity matter?****Understanding the importance of creativity**

In this module, learners will explore why creativity is an essential skill in the 21st-century. They will learn three strong reasons why it should be valued and nurtured in schools (creativity is a crucial 21st-century skill, promotes deep learning, and is related to well-being), and they will also reflect on why creativity matters to them.

**Module 3 - WHAT - What is creativity?****Understanding creativity**

In this module, learners will explore some definitions of creativity, demystify some misconceptions about the topic and build their own definition of creativity.

**Module 4 - WHO - Who is creative?****Recognizing your own creativity and your student's creativity**

In this module, learners will learn about different ways of being creative, exploring their creative strengths, and recognizing creative characteristics in their students.

**Module 5 - WHERE - Where creativity flourishes?****Building creative learning environments**

In this module, learners will explore some characteristics of learning environments that promote creativity and choose one aspect in their classroom that they want to modify to encourage creativity.

**Module 6 - HOW - How can I promote creativity in schools?****Teaching about, for, and with creativity**

In this module, learners will learn three ways to promote creativity in schools, explore different approaches to creative teaching, and be introduced to creative thinking skills.

## Module 7 - WHEN - When teaching creativity?

### Finding time for creativity in schools

In this module, learners will learn how to incorporate creativity in different situations and moments of school, explore ways to teach the content along with creativity, and understand the importance of seeing creativity as a process.

## Module 8 - Keep going

### Strategies to keep engaged

In this module, learners will explore different ways to keep promoting creativity in schools after the end of the course and have access to the Creative Teachers Bill of Rights (from Mary Schreck) to help them spread creative teachers' rights.

## SCHEDULE

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
Lessons	Module 1	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8	
	Module 2							
Live Session		Modules 2 & 3 (Why & What)		Modules 4 & 5 (Who & Where)		Modules 6 & 7 (How & When)		Questions and additional resources

## APPENDIX G

### Final Framework (Modules 1 and 2)

#### Building Creative Schools

This course is a resource for educators who are interested in promoting creativity in their classrooms. It is designed around six questions (the 5W1H of creativity in schools). Why does creativity matter? What is creativity? Who is creative? Where creativity flourishes? How to promote creativity in schools? When teaching creativity?

The course has eight modules. Module 1 is a course orientation. Modules 2-7 address the questions above (5Ws1H). Module 8 suggests strategies to keep learners engaged with creative teaching and learning after the course is completed. Along the path, learners will have access to recorded videos, live sessions, visual materials (infographics and mindmaps), guided activities, discussion forums, and additional resources (articles, book chapters, books, videos) to extend the learning.

This course aims to help educators get a more in-depth understanding of creativity, recognize their own creativity, and show different options to promote it in schools. It also hopes to create a community of creative educators who can share experiences and support each other.

#### **MODULE 1 - Course orientation**

##### **Where are we heading, and who is with us?**

In this module, learners will get to know the course instructors, explore the course's framework, learn how to get the most out of the course, get their Creative Journal, and sign their Creative Commitment.

<b>Video</b>	Watch lesson 1 - Welcome
	Watch lesson 2 - Introducing the instructors
	Watch lesson 3 - Course tour
	Watch lesson 4 - Glasser Pyramid - Why only watching the videos is not enough?
	Watch lesson 5 - Suggestions to get the most out of this course
	Watch lesson 6 - The Creative Journal
<b>Activity</b>	Explore your Creative Journal
<b>Video</b>	Watch video 7 - Your Creative Commitment
<b>Activity</b>	Sign your Creative Commitment
<b>Interactions</b>	Introduce yourself in the discussion forum and start making new connections.

## **MODULE 2 - WHY - Why does creativity matter?**

### **Understanding the importance of creativity**

In this module, learners will explore why creativity is an essential skill in the 21st-century. They will learn three strong reasons why it should be valued and nurtured in schools, and they will also reflect on why creativity matters to them.

<b>Video</b>	Watch lesson 1 - Summary of Module 2
	Watch lesson 2 - The future is here. Now what?
	Watch lesson 3 - Three reasons for creativity in schools
	Watch lesson 4 - Creativity as an essential 21st-century skill
<b>Reading</b>	Read infographic The growing importance of creativity

<b>Video</b>	Watch lesson 5 - Creativity and deep learning
<b>Reading</b>	Read infographic Revised Bloom's Taxonomy
<b>Video</b>	Watch lesson 6 - Creativity and well-being
	Watch lesson 7 - Intrinsic motivation - A key element to creativity
	Watch lesson 8 - Why creativity matters to you? - Guided Activity
<b>Activity</b>	Write on your Creative Journal - Why creativity matters to you?
<b>Interactions</b>	Share why creativity matters to you in the discussion forum.
<b>Additional Resources</b>	<p>Optional:</p> <p>1) Read an article about education in the 21-st century and its role in promoting creativity.</p> <p>Neves-Pereira, M. S., &amp; Alencar, E. M. L. S. (2018). A educação no século XXI e o seu papel na promoção da criatividade. <i>Revista Psicologia e Educação On-Line</i>, 1(1), 1-10.</p> <p>2) Explore two reports about creativity and education.</p> <ul style="list-style-type: none"> <li>• <a href="#"><u>Creating Creators Report - How can we enhance creativity in education systems?- Lego Foundation</u></a></li> <li>• <a href="#"><u>Schools of the Future Defining new models of education for the Fourth Industrial Revolution - World Economic Forum</u></a></li> </ul> <p>3) Read this book about the school of the future.</p> <p>Piangers, Marcos, &amp; Borba, Gustavo (2019). <i>A escola do futuro: o que querem (e precisam) alunos, pais e professores</i>. Porto Alegre: Penso.</p>



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Luciane Bonamigo Valls

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