Steps Towards an Integration of Critical and Creative Thinking through Reflective Practice

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Abstract: This synthesis is a personal narrative reflecting upon insights learned through the Critical and Creative Thinking program at University of Massachusetts Boston. Before joining the program, I was concerned that a lack of creative ability was hindering me, both personally and professionally. My goal in completing the Master’s degree was both to enhance my own creativity and find a balance between critical and creative thinking. This synthesis shares my reflections on my experience in the program, including how coursework such as psychology and philosophy influenced my understanding and expression of creativity. I also discuss two main themes which emerged for me within the program: the importance of reflective practice in understanding and integrating the information and tools learned, and a focus on integrating critical and creative thinking rather than balancing them equally. Lastly, I share a model of thought that leverages critical and creative thinking within a larger framework of reflection, along with a three-step approach to ongoing reflective practice.

* The Synthesis can take a variety of forms, from a position paper to curriculum or professional development workshop to an original contribution in the creative arts or writing. The expectation is that students use their Synthesis to show how they have integrated knowledge, tools, experience, and support gained in the program so as to prepare themselves to be constructive, reflective agents of change in work, education, social movements, science, creative arts, or other endeavors.
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I began the Critical and Creative Thinking program during a time of significant personal and professional change. Feeling burnt-out and restricted in my current industry and career, I hoped that diving into a new community and exploring new topics would provide both relief and a fresh perspective. When I consider my beginnings in the program, my primary belief (and worry) at the time was that a severe lack of creativity was hindering me, both personally and professionally. Though I believed that critical and creative thinking could only benefit my consulting work, I also wondered how developing and balancing the two might help me to become a better person, to become the best possible version of myself. Of course, this begs the question of what “the best possible version” means and for me it means that I feel engaged in my work, relationships, and activities, both personal and professional, and that I feel I’m contributing my talents, skills, and personal traits in a way that is meaningful and adds value.

In the years prior to joining the CCT program, I had what most would consider a good job, it was often extremely stressful but it was interesting and challenging. But I wasn’t happy; I didn’t feel engaged in my work and I didn’t feel that I was contributing enough, at least not in the way that I wanted. Having spent over 20 years in the financial services industry, I had moved into a process improvement consultant role several years prior. I’ve always loved diving into the details of different types of work and I naturally gravitate to wanting to solve problems. This type of role sounded perfect at the time and it was a welcome change from the high-volume, high-stress operations positions I’d held before. As an internal consultant, I looked forward to the opportunity to help my co-workers solve some of the problems that gave them grief on a day-to-day basis and, even better, this work was sanctioned and supported by upper management. They had created a team of process analysts for just this purpose and I was looking forward to contributing to it.

Unfortunately, the timing was terrible and the role did not turn out as I had envisioned. I joined this new team in 2008, just before the financial crisis. The stock market soon began to tank and financial services seemed on the verge of imploding. Share prices were falling and people were afraid not only for their bank accounts but also for their jobs. Lehman Brothers, an institution in the industry, had just gone bankrupt and others seemed on the verge. The price per share of our company had dropped significantly and there was a real fear of being acquired by another firm. The markets were full of uncertainty and the company quickly moved to an
environment of cost-cutting and promoting efficiency. The work I was assigned became almost solely about finding ways to minimize costs and maximize productivity.

As much as I had envisioned being a resource to help my co-workers solve problems, I worried that, in their eyes, I had now become the problem. While employed by the same company and personally friends with many of these people, I wasn’t really a part of their team and I was asking a lot of questions about what they did and how they did it. They might have considered me a spy of sorts, sent by the executives to expose their flaws and weaknesses. Sadly, at the end of the day, in many cases it turned out they were right, unintended though it might have been. What had begun as a process improvement effort, with the intention of re-deploying extra manpower to new products, quickly became an exercise in cost-cutting and workforce reductions. As time went on, I began to dread the work, just as they likely dreaded seeing me coming their way. While I didn’t necessarily want to return to my previous role in operations, at least then I had done work that I was proud of. In my new role, any improvements we made had to be quantified, in terms of employee headcount, and it became a very demoralizing way to work. I slowly realized that I had started to feel shame about the work that I was doing.

My boss and mentor tried to assuage my conscience, explaining that this work helps the company stay competitive and ultimately saves many more jobs than the relative few that are eliminated. And while that may technically be true, it wasn’t enough for my peace of mind. The problem boiled down to a moral dilemma - was I willing to do work that benefited the “many” at the expense of the “few?” There were pros and cons to both sides of the argument and I weighed both sides of the argument, both logically and emotionally. I struggled with this every day and wish I could say that I came to some sort of resolution on my own. Ultimately though I left that company, myself now a victim of workforce reductions, an irony that was not lost on me and was perhaps even welcomed as a means of penance or karma. Though I tried a similar role at a different company, I found that my heart still wasn’t in it. Although workforce reductions weren’t in play at this new company, it was still primarily an effort at cutting costs rather than solving true industry or customer problems. At this point, I wanted to find work that was more meaningful and engaging, something I could really advocate, support, and be enthusiastic about. But what would that work be?
By this time, I had found the CCT program and it seemed the perfect opportunity to explore this question. I knew that it could only help with my consulting work, if I decided to continue on that path, and that it would likely benefit any other career path as well. I was hoping to find more interesting and innovative work but I wasn’t confident I had the skills for it. I had always felt that I was lacking in creativity, having spent much more of my work life honing my analytical skills, and I suspected that this imbalance might be holding me back from finding more fulfilling work. I hoped that enhancing my creative thinking skills and working to integrate those with my existing critical thinking skills would provide a better platform to perform more meaningful and innovative work. I was also looking forward to broadening my horizons by meeting people in different industries and roles than my own and this seemed the perfect opportunity.

Now nearing the end of this program, through this synthesis I’d like to reflect on and evaluate my progress towards these goals and develop a plan forward. I’m under no illusion that I have become an expert in critical and creative thinking but instead hope and believe that I’ve learned and developed the skills enough that I can confidently continue to leverage them and incorporate them in my life and work going forward. It is my hope that this synthesis may be useful to others who might be in a similar position, with a goal to broaden and expand their thinking while exploring and implementing personal or professional change.

Progressing Through the Program

As a preamble to formally applying to the CCT program, I enrolled in the Creative Thinking course to test the waters. Early on I found that much of my fear and perception about a lack of creativity was actually a misperception. I have historically thought of creativity primarily in the realm of artistry. When asked about creativity, my mind would immediately default to art, music, painting, dancing. Fortunately, one of our first course exercises was to study definitions and theories of creativity. While definitions and variations abound, Amabile’s (1988) definition that “creativity is the production of novel and useful ideas by an individual or small group of individuals working together” particularly resonates with me. Viewing creativity in this way makes it much more accessible for me. Previously, I didn’t immediately recognize science, math, problem-solving, and many other disciplines as being creative - these activities just didn’t
match the definition in my head. Leveraging this new, broader definition of creativity provides much more opportunity to explore my own creativity than restricting it solely to the arts.

Through this course and others, I have had the opportunity to further practice and explore my own creativity. The Seminar in Creativity afforded me the opportunity to delve deeper into understanding my own creative blocks. Reflecting on my experiences with creative work showed me that a fear of failure drove a habit of procrastination, and that I have a healthy dose of perfectionist tendencies as well. Having now identified these blocks, I took the opportunity to explore further through reflective writing in the Foundations of Philosophical Thought course. My creative blocks seem to center around the idea of approval of my creative work and so I used philosophy to consider my thoughts about that. I questioned who might have the authority to judge my creative work and whether I was willing to accept that judgment. At the end of the day, while I won’t say that these blocks have magically disappeared, I do understand them better and have come to realize that truly it is up to me to be my own judge and jury. If I can recognize novelty and usefulness in my work, then it is creative by my own standards and that will suffice. Ultimately, I have realized through this work that I am and always have been creative.

However, my creativity was haphazard at best, not something that I cared for and cultivated. Through coursework in cognitive psychology, I am better able to understand some of the intricacies of the brain and how my thinking might have evolved in this way. Thinking can be a very resource intensive activity, particularly when concentrating on something that is cognitively challenging. Our brains have a limited capacity of resources to allocate to different thinking tasks at one time. As we practice different types of thinking, we may then develop habits and heuristics, or “rules of thumb”, that allow us to think and make decisions more quickly and easily. We begin to rely on these to make our thinking more efficient and less resource intensive (Kahneman, 2011; Reisberg, 2013). Over time, as I put more attention and practice on critical thinking skills through school and my career, I suspect that they became easier for me and therefore I relied upon them more. In effect, I had become a habitual critical thinker, defaulting to analytical skills rather than working to integrate both critical and creative thinking, utilizing whichever would best suit the work of the moment. While I won’t go so far as to say I was a poor thinker, I was not a thoughtful or purposeful thinker. I was not yet familiar with the intricacies of metacognition; that is, thinking about and evaluating my own thinking.

If I were to visually present my dilemma, it might look something like the below:
While I could recognize the elements of both critical and creative thinking, they seemed scattered and out of balance. I wanted a more integrated way of thinking that would allow me to leverage both types of thinking equally and I felt confident that the CCT program could help me to get there.

**What I’ve Learned**

As I now arrive near the end of the program, I reflect upon how my thinking has changed over the past few years and what I’d like to continue to work on going forward. I have learned various techniques and processes related to critical and creative thinking. I have had the opportunity to leverage and practice these through the experiential and problem-based learning that the CCT program is based on. How though do I ensure that I continue to practice and integrate these skills going forward?

To properly reflect on this question, and in the hopes of sharing something of substance which might help others interested in similar reflection, I will share some of the themes of what I have learned and the work I have yet to do.

**The Benefits of Reflection**

My initial foray into the Critical and Creative Thinking program was motivated by a period of reflection (informal though it might have been). Although Reflective Practice is not named in the actual title of the program and was not my primary goal in pursuing the Master’s degree, I would argue that it has ultimately been one of the most valuable tools in my experience. I was driven to enroll in the CCT program after reflecting on the fact that my work
was no longer satisfying to me. Though my reflection and thought process was not formally laid out at the time, I worked my way through a number of reflective questions at the start:

- What about my current work is making me unhappy?
- What type of work would be more meaningful/purposeful?
- What obstacles exist in pursuing that type of work?
- How might creativity and creative thinking skills be strengthened to overcome these obstacles?

These questions led me to the CCT program where I learned a number of different creative thinking techniques and worked through various exercises and assignments to put them into practice. However, the reflective practice techniques that we used, such as weekly journals, reflective writing assignments, and dialogue around written work (Taylor & Szteiter, 2012) were an invaluable part of growing my understanding of creativity in general and my own creative process specifically. It was through those journals and reflection that I began to understand why I might have difficulty putting those techniques into practice, how to try to work around those creative blocks, and how to use my critical thinking skills to identify areas where I was already being creative. This was one of my first experiences of integrating critical and creative thinking, though I didn’t really label it as such as the time. Combining these two ways of thinking ultimately provided more insight and useful perspective into my own thinking. Had I not reflected and analyzed my own thinking, I might have just completed the exercises, accepted my grades, and moved forward. But through this reflection and analysis, I began to see where my own narrow view of creativity and my fear of failure were limiting my abilities to exercise creative potential.

Integration Rather Than Balance

When I began this program, I believed that I needed to balance critical and creative thinking, suspecting that an imbalance was actually detrimental. I was burnt out on the analytical side of thought, having seen it used primarily in ways that felt destructive. However, now through this program, I’m able to again leverage critical thinking skills in ways that are more generative and constructive. In doing so, I’ve regained an appreciation for those skills and feel less angst about my thinking being perhaps a bit lopsided in their favor. Having now recognized and scrutinized that bias against critical thinking a bit more, I lean towards the idea that it is
about integration rather than balance. Rather than using each type of thinking in equal measure, better that they are both equally accessible for use at the appropriate time.

A Model of Thought

Putting these themes and concepts together, I envision a new model of thought as follows:

Reflective thinking is the overarching theme which then encompasses each other type of thinking. Within reflection, the use of metacognitive questions can trigger more specific and in-depth exploration. Lastly and even more specific, critical and creative thinking, and their corresponding techniques, are then used as and when appropriate to dig even deeper. Though the image shows them in equal measure, it is more about accessibility rather than actual practice. This model is also an iterative process whereby the reflection is ongoing and somewhat cyclical, taking stock of outcomes resulting from periods of critical and/or creative thinking and then continuing again with further reflection and so on.

Reflection or reflective practice is ultimately the tool that I found most helpful during my time in this program. Those periods of reflecting on my thoughts, my actions, and my obstacles have led to significant insights into my skills and my struggles. During my creative thinking courses, reflecting on my initial definition of creativity led me to understand that I had limited my expression of creativity by limiting my definition of it. Widening my definition to include more traditionally analytical areas allowed me the freedom to participate as creative as well. Later, reflecting on my struggles with beginning creativity exercises provided further
insight that my struggles weren’t simply procrastination but rather a fear of failure or of “not doing it right.”

The use of metacognitive questioning during these periods of reflection also encouraged additional exploration. Flavell (1979) presents the idea of metacognition as “cognition about cognitive phenomena” (p. 906). Put more simply, the idea is about thinking about our thinking, that is, monitoring how and why we are thinking. Using both critical and creative thinking techniques to explore these metacognitive questions allowed an opportunity to better integrate those skills. I began the program having reflected upon my creative abilities and concluded with a belief that I wasn’t particularly creative. As we discussed definitions of creativity, I asked myself how I defined creativity, why I defined it that way, and then I asked how else I might define it. Using critical thinking to check the assumptions I held and then to consider alternatives, I recognized that I had a quite limited understanding of creativity. Once I understood that I had imposed these limits, I was able to think more broadly and create a more useful and relevant definition for myself.

Once I had broadened my definition of creativity to include non-artistic expressions, I asked myself in what ways I might already be expressing creativity that I hadn’t recognized before. Using creative thinking techniques such as brainstorming and freewriting, I was able to consider scenarios such as problem-solving and project planning as creative activities which I was already doing and doing fairly well.

The Way Forward

As I sit here at the end of the program, I wonder what more I can do and how to ensure a continued commitment to reflective practice and integration of critical and creative thinking. I’m now quite familiar with how I think, both the positives and negatives, and have identified several scenarios to practice more creative thought. But as I commence from this program into an ongoing life of thinking, learning, and doing, I find that I want to do and be more. A classmate suggested that perhaps I need to accept myself as I am, even if that means more critical than creative, and I do take that suggestion to heart. Through the reflection of this program, and this synthesis, I am now better able to appreciate and even celebrate my use of critical thinking. What I had previously considered to be primarily destructive, I now view more positively and will endeavor to use it to its best advantage. However, I also want to continue to
develop my creativity as I move forward. In essence, I want to continue to practice both elements so that I can be my best and contribute my talents and skills in the best way possible. I want to be more thoughtful about how I think, when I think, and in what ways I think. To that end, I will continue to rely on reflective practice and metacognition as a significant part of my approach forward.

Having defined the model of thought that I propose to follow going forward, the next step is to define the approach. That is, how will I ensure that I’m actively using this model and how will I evaluate whether I’m happy with my progress? Much of the CCT program is based on experiential or problem-based learning, an approach which I found to be very beneficial. Inspired by that model, I propose a series of small “projects” to focus my efforts. For each project, I will leverage this model of reflective practice encompassing metacognition, and critical and creative thinking.

My initial goal when joining the program was to enhance my creativity and I still see that as a valid endeavor. To that end, beginning projects will focus on better understanding and recognizing the creative process in various domains so that I may then incorporate what I learn into my own process. In keeping with the larger purpose of reflective practice, and to align these projects with the model of thought described earlier, I propose to follow a three-step process:

1. Understand what others have done: This might be done by reading a book or journal article, viewing a film, or discussing the topic in a public/private forum.
2. Reflect on what I have learned: Think critically about how these alternate processes compare with my own. Brainstorm opportunities to incorporate what I’ve learned into my own work and experiment with new processes.
3. Take action: Implement some of the changes identified in step 2 and then reflect upon the outcomes. What worked well? What could have gone better? What changes might you make if or when you try again?

As with the model of thought, the reflection within the process is the critical element. Each step offers the opportunity for critical and creative thinking as I gather information, compare it against my own processes, identify opportunities to make changes, and evaluate outcomes. However, it is the ongoing theme of reflection that allows me to tie those pieces and outcomes together and gain actionable insight from this process of thinking and learning. It is only with reflection upon what I’ve discovered, what I could change, what happened when I’ve tried those
changes, that I can make more informed decisions about the work that I’m doing and how to move forward.

These reflections will be made in the form of journals and freewriting. While the formal reflection will likely begin as a periodic exercise during these projects, my hope is that, over time, informal reflection will also become a natural and daily event. I have found reviewing previous reflection journals over time to be very valuable in seeing changes in my thinking as well as identifying ongoing themes that might need further exploration. While I found my diary entries in Creative Thinking to be insightful as I was writing them, I’d argue that they were just as valuable, if not more so, when I re-read them later as part of this synthesis project. I was reminded of where my thinking was when I started this program, and became aware of how much my thinking has changed. As an example, I found myself somewhat annoyed reading journals opining that I’m not creative because I now recognize how wrong my perception was. I’m also reminded of some of my creative blocks which I find to be helpful. Creative blocks can be insidious and sneak up on you, masquerading as procrastination or being “too busy.” A reminder can be helpful as a trigger to evaluate if those blocks are still at play and how they might be addressed.

Evaluating my progress, via these reflections, is also important to reinforce the work that I’m doing and hold myself accountable to achieving my goals. Ultimately the purpose of these projects is to have a focal point for reflecting and integrating critical and creative thinking. Having a sense of whether I’m improving in those efforts will allow me to evaluate my current approach and determine if changes need to be made. Reflection and metacognition are most useful if those ideas and conclusions are then used to make changes, to continue a path of learning and growth. The use of a simple Likert scale indicating positive or negative feelings about my work, progress, and reflections may be enough to provide some quantitative data to go along with the more qualitative nature of journal entries and get a sense of the trend over time.

Another aspect of this process to consider is that of constituency building and support. Having participated in a personal development/reflection group in the past, developing a support network while undergoing this type of reflection and personal change can be invaluable when challenges arise. This support might take the form of sharing thoughts and experiences, having someone challenge my assumptions, or providing feedback on ideas I’d like to share. One option for this support exists within the CCT program itself by participating in CCT
Community events and maintaining relationships with fellow CCT alumni. Another opportunity to develop support is to participate in subject-specific groups when those are available. Ideally these groups will already leverage reflective practices but, if not, there may be the opportunity to introduce them to the group over time. Lastly, there is the option, or rather the responsibility, to rely on myself to motivate and follow-up on the work taking place. Because these projects and, ultimately, this overarching theme of self-reflection is something I’ve undertaken on my own accord, it is my responsibility to introduce practices to either ensure progress or evaluate whether my needs have changed. Introducing self-imposed deadlines may be one approach, or scheduling period “retreats” to reflect on my program and process and evaluate progress and priorities would be a valuable addition to this model.

In Conclusion

I began this program at a crossroads in my career and with hopes that this work would provide me with a fresh perspective; I can assuredly say that it has. I am still grappling with decisions about my career path but I have found that I am much more open-minded about potential options and am more confident in my creative abilities. While I still struggle with defaulting to critical thinking and analysis, I am much more aware of that tendency and I have an arsenal of tools and techniques that I can use when I need to delve more deeply into different types of thinking.

I’ve also found through this program and through this synthesis, a better way to approach these questions and problems, using reflection, metacognition, and critical and creative thinking. Though certainly the questions and timeframes will change, the framework and tools are easily accessible and reliable. To share a more concise view of this approach and my plan forward, I’ve included preliminary plans for a guide/workshop, that others might use or adapt in their own pursuits. In addition, as part of my effort to commit to and expand my own reflective practice, I have begun to explore further what others have done to learn from and adapt best practices. While this review may not be complete at time of graduation, I have included preliminary source information in Appendix B below.
References


Appendix A

Guide/Workshop

1. Initial Period of Reflection and Metacognition:
   - Present overview about reflective practice, definition of what it is and potential techniques to implement it.
   - Include a definition of metacognition and describe characteristics of metacognitive questions.
   - Activity: Suggest the idea of a governing question and use reflection and metacognition to hone in on an actionable question, topic, or problem to explore. This could be something like practicing creativity or critical thinking, making a career change, learning a new skill or hobby, etc. A governing question can help orient and focus our research to avoid becoming overwhelmed and distracted by information (Taylor & Szteiter, 2012).
     - What situation am I trying to better understand or change?
     - What is my current understanding or perspective about this situation?
     - What would I like to change about this situation?
     - Describe a potential vision of the future related to this topic.

2. Use of Critical and Creative Thinking to Explore the Governing Question
   - Provide definitions/explanations of critical and creative thinking and provide examples of techniques for both.
   - Discuss ways that critical and creative thinking can be used together to further explore some of the ideas or move through potential blocks.
   - Activity:
     - Understand What Others Have Done Before: Use critical and creative thinking techniques to identify alternatives to the current situation. What have others done in this space? What resources are available to further guide and enhance your understanding of the problem or topic you are exploring?
     - Reflection: How do your ideas and perceptions differ from others that you have found? Reflective tools such as freewriting (Taylor & Szteiter, 2012, p. 89), dialogue journaling (Jensen-Hart, Shuttleworth, & Davis, 2014), or
asking ‘What if?’ (Austin & Farlinger, 2016) might be helpful in eliciting further insight into the issue.

- **Take Action**: Techniques such as brainstorming or mind mapping may be useful in considering alternatives to current processes/habits (Ritter & Brassard, 1998).
  - What actions can I take now to begin implementing or experimenting with these changes? This could include lessons in a new skill or hobby, informational interviews regarding a new career, etc.

3. **Iterative Process**
   - Present this as an iterative process which reverts to another period of reflection and metacognition, potentially with a further refinement (or a shift) of the governing question.
     - What have you learned so far? How has your perception or impression of this problem changed, if at all? Review your previous reflections and governing question. What new information can you add to refine or modify your original goals/intent?
     - This reflection may then lead to the need for additional research and critical and creative thinking until an appropriate way forward has been identified.

4. **Ongoing Support & Constituency**
   - Discuss benefits of developing support and building constituency.
   - As part of the workshop, ongoing support may include follow up meetings to discuss progress, obstacles, and evolving lines of inquiry. These meetings could consist of small groups or buddy-pairs developing an ongoing relationship of peer support and/or a gathering of the entire group to share and reflect.
   - Individual support mechanisms are also encouraged to ensure that participants can move forward with this type of reflective work in the absence of the more formal group support.
   - Activity: Identify friends and family who might be willing to provide support/feedback during this process of exploration and change. Alternatively,
investigate what online or in-person groups exist (if any) specific to your topic or problem. Speaking with others practicing or struggling with the same subject matter can be an invaluable means of support when attempting to make change.
Appendix B
Potential Literature Review


