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Communicating Creativity: A Workshop and Communication Tools for Teaching and Consulting in Creativity

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Buffalo State College
State University of New York
Department of Creative Studies

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Submitted in Partial Fulfillment
of the Requirements
for the Degree of
Master of Science

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Dates of Approval:

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Project Advisor

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Candidate
Abstract

This project developed tools to support a consulting practice integrating the author’s interests in creative process, design and organizational strategy. The focus is on educating students and clients about creativity, creative thinking, design and innovation. Design thinking concepts of user feedback and rapid prototyping were used during the project. The resulting products are materials for a multi-day graduate level workshop for design students, a creativity website including blogging capability and a four minute educational video aimed at helping establish an Aerospace Technology Center in Northern Illinois.
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This project is an important milestone along my path to helping others see and use the creativity within them. I expect the winding road to continue.

The path toward this project began with a simple, powerful question from my wife, Dinny (Virginia). “What do you want to do for the next twenty years?” And so it began. I had to think about new directions. I wanted to use my 30+ years of corporate experience but in a very different way. Stan Gryskiewicz, a longtime mentor, said “you should talk to John Cabra at Buffalo and Jane Creswell at Purdue. They helped me get started in creative studies and coaching. I reached out to Jonathan Vehar who insisted I go to CPSI and take the Springboard course from Blair Miller. And on it went.

My sincere thanks go to the faculty at Buffalo State. John Cabra encouraged my interest in Design Thinking and Creativity. Russ, Roger, Blair, Cyndi, Sue, Gerard and Mike understood when I was confused or confusing. Thank you all.

Thanks so much to my Design education team. Hugh Musick and Jeremy Alexis, who turned prospective student into teacher. Thanks also to Kim Erwin, Laura Forlano and Kelly Costello, who guided an eager student in the basics of Design Thinking.

My wonderfully supportive classmates, The Mathemagical Cows, have inspired, challenged, nudged and mooed me through this challenging work. We have some wonderful stories together. I miss our dinners together “downtown.” Thank you.

Back to my family. Thanks to my children, Anne and Tom, for not thinking their Dad was completely crazy in going back to school in his 50’s. Thanks to my Mom and Dad for always encouraging me to try new things. Most of all, thanks Dinny. You are the
love of my life. Your unwavering confidence and support have made all the difference. I could not have done this without you.
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Communicating Creativity:
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Tolerate ambiguity! So goes the mantra of Creative Studies students and practitioners alike. Yet we embrace process as well. Evidence this APA formatted paper and the scientific approach of the Creative Studies curriculum. This project combines the open-minded approach, avoidance of premature closure, and striving for a good solution that creative thinking can deliver. This project is about teaching and communicating the message that approaching problems from a creativity-oriented perspective leads to better solutions. The project produced three products: a prototype graduate level course, a website for a creativity practitioner, and a pro bono video that uses a creative approach to building community support for an innovative educational initiative.

**Background to the Project**

Three and a half years ago I began an interesting journey. In many respects it can be considered a creative journey. I had spent over thirty years in corporate roles that were challenging and required thinking and doing at a high level. Throughout that time I was known as the “creative” guy. New and different approaches to problem solving and developing business strategies had always appealed to me. Most of the time I was establishing new functions and using new methods, some of which were quite different. I also did a fair amount of facilitation of high-level strategy and problem solving work. This was probably the most enjoyable work for me. Through the years, I also developed a keen interest in innovation and creativity. Through an industry group, the Association for
Managers of Innovation, I gained insight into the creative process and how innovation worked in organizations.

In early 2010, I found myself at the “goodbye” end of a corporate reorganization. At that time my wife posed the most empowering question I have ever been asked. “What do you want to do for the next twenty years?”

This began my journey to understand creativity, innovation, design thinking, and leadership at a higher level. My goal was to explore this space and how I might play a role in it.

The process began by reaching out to the Illinois Institute of Technology, Institute of Design (ID). Here I learned that I could combine both teaching and learning. I taught students about business strategy and ID taught me about design thinking and the design process. Beyond ID, there was coursework in nondirective coaching that helped me get out of my own head and be fully present for another (well, sometimes). And finally there was the Creative Studies program at Buffalo State College that has helped me begin to pull these fields together.

This project continues that exploration. It is different than originally proposed. That is not surprising and was expected from the outset. By remaining open and avoiding “premature closure” the project has evolved from the original intent of the concept paper. It has prompted a great deal of thinking and doing that has moved me forward. It provides the base to move into my future.

**Project Purpose**

The overriding theme for the project has been innovation. Innovation can have a high level of complexity, yet it often looks simple and elegant. It takes many forms and
requires a diverse set of skills and abilities. Can we help others innovate by teaching them about creativity and creative process? Can we use innovative methods to communicate the value of creativity and design thinking? Can we use individual creativity in service of others in the community? This project developed prototypes and tools aimed at answering these questions and encouraging others to tap into their creative potential.

The project developed content for a graduate level course in creativity. The content will be used in workshops that combine creativity, design thinking, and creative leadership in a way that would be useful to a client or student audience. To communicate more effectively, the project explored a variety of media, including written, online, and multimedia forms.

The project also developed a web presence for a consulting practice. While I have done some consulting, this has been a stretch for me. This part of the project allowed me to focus on communicating my skills and abilities to potential clients. While still in a prototype stage, it will provide a vehicle for me to refine my message to the outside world.

During the course of the project an opportunity to work in the community presented itself. This opportunity was compelling enough to modify the overall direction of the project. My role in the project has been one of creative facilitator and creative producer. I found this combination energizing and exciting. It gave me the opportunity to combine the skills of creativity, design thinking, and innovation in service to others in the community. That was unexpected and rewarding.

The project also offered an opportunity for me to explore a variety of tools. While comfortable with technology, I am new to the world of websites, blogs, and new publishing methods. These were all prototyped during the project.
One overarching goal of the project has been to explore the intersection of several fields. I continue to be curious about the potential across the fields of creativity, design, organizational strategy, and leadership. This project tells the story of how these fields relate to and support one another.

**Rational for Selection**

This project represents the beginning of my journey to bridge the fields of creativity, design, and innovation. It does this from an organizational perspective. The base for the project is my accumulated thirty plus years of organizational experience, working for both large and small organizations. Within those organizations, I have encountered a great deal of misunderstanding about what “creative” really is.

In the vernacular of the thinking skills model, I sensed a gap. My strategic thinking helped me understand how everyone can be creative and that all persons can learn to be more creative. I saw this firsthand in my recent experience leading innovation management efforts at an insurance processing operation. One might not expect openness to creativity in such an organization. But I saw how the awareness of creative styles, preferences and abilities could help members of the organization work more effectively with each other. I also saw how effective creative problem-solving training could be.

This project was an opportunity to work in several areas of interest. The first area of interest was the education of design and technical students in creative problem solving methods. Designing a five-day workshop for design students was a major element of the project. The second area of interest was working with local business and government, applying knowledge creative problem solving and innovation and serving as a resource to others. The opportunity to work with a local group aimed at developing an educational
resource Center presented itself during the project. It was a happy intersection of this project's purpose and a local need. Lastly, I have begun to entertain the possibility of becoming an independent practitioner. A significant part of the project has been aimed at developing online and other infrastructure for my individual practitioner business.

**Pertinent Literature and Resources**

The project included:

- A prototype of 5-day workshop in creativity and innovation for graduate design students
- A “lunch and learn” derivative of the workshop focused on creative problem solving
- Creation of a website, blog and content. The primary purpose is to acquaint myself with how to use this method of communication.
- A video on behalf of a non-profit organization developing a proposal for an Aerospace and Technology educational campus that will provide Science, Technology, Engineering, the Arts and Mathematics (STEAM) experiences to local middle and high school students.

Most of the pertinent literature concerned the creativity and innovation workshop. The resources used to develop the website and video are also described.

**The Workshop**

The “Creativity, Creative Process and Innovation Workshop” is a prototype in development with the IIT Institute of Design (ID) as a possible offering within their graduate program. There is a great deal of interest in creative problem solving (CPS),
since it can provide an effective way for design teams and individuals to work together during their programs at ID.

The development of the prototype has drawn from a wide range of literature and resources. The first segment of the workshop is aimed at developing a clear picture of creativity, creative problem solving, and innovation. During my work in CRS 635, *Creativity and Change Leadership*, Professor Miller suggested a useful article by Jonathan Vehar (2008). The article’s objective was to provide clarity around the definitions of creativity, creative thinking, and innovation. Vehar noted that creativity is a noun, a thing or phenomenon that we can study. Creative thinking or creative process is something we can teach that can improve our ability to be creative. Innovation is more complex. Vehar stated “creative thinking is a critical part of the innovation process, likely with more than one occurrence” (p. 266). It requires a range of creativity and use of creative thinking processes throughout. And it most often “requires people working together to make it happen from different places in an organization or throughout its value chain” (p. 266). This framework provides a solid footing for the workshop.

The workshop goals are:

- Define and understand creativity, creative process, and innovation
- Introduce practical frameworks for innovation in groups and individually
- Show how understanding creative style and processes can foster innovation
- Introduce tools that can be used to innovate

**Creativity**

With regard to creativity, a number of definitions are referenced including Talbot, Guilford, MacKinnon, Robinson and others (Guilford, 1950; MacKinnon, 1978; Robinson & Aronica, 2009; Talbot, 1997). Studies by Adobe and IBM are also referenced with some detail provided. Figure 1 shows an example of the material in the Adobe study. It
illustrates that pressure to be productive has a negative effect on achieving creative potential.

Figure 1 - Adobe Study: Productivity Pressure and Creativity

In addition to Vehar's framework, Mel Rhodes’ (1961) 4 P's of creativity are used to frame much of the workshop material. In introducing the 4 P framework, Rhodes’ definition of creativity (that is also referenced by Vehar) is introduced.

The word creativity is a noun naming the phenomenon in which a person communicates a new concept (which is the product). Mental activity (or mental process) is implicit in the definition, and of course no one could conceive of a person living or operating in a vacuum, so the term press is also implicit. (Rhodes, 1961, p. 305)
Creative person

After discussing the definition of creativity, the workshop explores the creative person. After using the “blue slip” and “pair and share” tools developed by Smith (2007), the participants review the traits of creative people developed by Black (6+Creativity.pdf.). After that discussion, we introduce a brief history of creativity drawn from Runco and Albert's article included in the Cambridge Handbook of Creativity (2010).

The workshop explores the definitions of everyday creativity by Richards (2010) and the definitions of mini-c, little-c, Pro-c and Big-C developed by Kaufman and Beghetto (2009). This provided a good starting point for a discussion about how one can determine what is and is not creative.

Creative process

The next “P” covered is process. This discussion largely revolves around the Thinking Skills Model developed by Puccio, Mance and Murdock (2011). To set up the discussion, we briefly touch on Wallas' (1926) model of creative process covering the steps of preparation, incubation, illumination, and verification.

The process section takes a deeper dive into the Thinking Skills Model. This sets up the use of the commercial product developed by FourSight LLC (FOURSIGHT - your thinking profile, innovation tools and team assessments.). The material is largely similar to or drawn directly from CRS 559, Principles in Creative Problem Solving. The aim is to provide a useful overview of CPS. This includes the executive step or diagnostic step involved in the process followed by details of the clarification, transformation and
implementation processes. Figure 2, adapted from FourSight™ and Puccio, Mance and Murdock (2011), summarizes these processes and their more detailed processes.

![Figure 2 - Thinking Skills Model and FourSight Styles](image)

After review of the Thinking Skills Model, the concept of the “creative heartbeat” is introduced through a discussion of diverging and converging. We also discuss the roles of the members of creative problem-solving teams. This includes the role of the facilitator, the resource group, the process buddy, and the client. This sets up a transition to the FourSight process that is associated with the model. Each of the stages of the FourSight process includes both divergent and convergent tools and processes. Key literature sources for this part of the conversation include works by the Creative Education

Within each of the stages, key questions, divergent tools, and convergent tools are described. The remainder of the creative process materials focuses on work derived from Puccio and FourSight. This provides attendees of the workshop with a solid practical base that they can build upon. Additional elements of the process are provided through references to the works of Miller, Vehar and Firestien (2001, 2003).

An additional element providing further depth to the FourSight thinking styles is an approach developed by Dr. John Cabra from work done by Tracom (SOCIAL STYLE - the TRACOM group.) and Merrill and Reid (1981). This correlates each problem solving profile with a set of behaviors and needs. They show the preferences of each FourSight profile and show their preferred style of solving problems, their stress behaviors, and their behaviors under extreme stress. I have found these characterizations to be very helpful to workshop participants. They often shed light on the creativity preferences of individuals in day-to-day activities. This helps make the preferences feel more real to the workshop participants.

Tools that are introduced to the participants include brainstorming, brainwriting, SCAMPER, Hits, Card Sort, POINt and evaluation matrix covered in Miller’s work (Miller, Vehar, & Firestien, 2004).

**Creative press or environment**

In this section of the workshop, we touch on elements of the environment that can encourage or discourage creativity. Stimulants and obstacles to creativity are discussed as
mentioned in Miller’s work (Miller, Vehar, & Firestien, 2004). The effect of communication on creativity is also covered. We note the importance of non-verbal communication.

We also hit the highlights of Amabile’s work (Amabile & Kramer, 2011) on the Progress Principle. This includes the need for an inner work balance for the individual. The effect of progress and setbacks are discussed and a list of catalysts that improve inner work life are provided to set up a discussion among the workshop participants.

**Innovation and creative product**

This section of the workshop combines works by Kirton, Smith, Rosenfeld and others (Kirton, 1976; Martin, 2009; Rosenfeld & Kolstoe, 2006; Smith, 2007). It introduces a framework that I have developed over the past few years to help me understand some of the effects of creative preference on the innovation process. It is based on the belief that everyone is creative in his or her own way. Allowing and encouraging creative behavior can encourage innovation. Using a combination of instruments and language, the framework these tools together in a way that is both analytical and intuitive.

Organizations seeking to innovate face the challenge of understanding the nature of the creativity preference or style of their employees. This is primarily driven by a lack of awareness of creative styles and how they might be used to an advantage.

We begin with a brief introduction to Kirton’s KAI instrument (1976). The workshop emphasizes that the KAI is a measure of preference for not level of creativity. Rolf Smith's (2007) Seven Levels of Change are introduced to illustrate the range of potential change that an organization can pursue. A short video on Smith’s evolution of
this continuum is included to provide perspective. Rosenfeld’s (2006) terminology of “builder” and “pioneer” is added since it has positive connotations at both ends of the continuum. This results in a graphic (Figure 3) that shows the overlap between several instruments and languages.

Figure 3 - Preferred Creative/Innovative Style

The workshop continues by relating the characteristics of each and of the creative continual. It illustrates a balance between “building” and “pioneering.” This opens up the discussion about innovation within organizations. By understanding preference and aligning that preference with organizational goals, a more effective innovation process can result. Recognizing the characteristics of incremental innovation and breakthrough innovation can help organizations put together teams that will be more effective in achieving their goals. In my own experience, many organizations that say they are
interested in breakthrough innovation. When observed though, they appear focused on incremental innovation. By increasing their awareness of their true goals, these organizations can be more effective and more enjoyable environments in which to work.

At the end of this section of the workshop, I introduce my experiences during work in innovation management within one organization. This adds an element of reality to the theoretical work we have discussed.

**Design and business perspectives on innovation**

My interest in creativity and design thinking comes from the recognition of the parallels and synergies between the fields. Reflecting on the Thinking Skills Model (TSM) and Tim Brown’s “three spaces of innovation” (2009, p. 15), one can see the similarities. TSM’s terminology of clarification, transformation and implementation comes close to Brown’s analogous inspiration, ideation and implementation. Further similarities come to mind when Brown states:

> The reason for the iterative, nonlinear nature of the journey is not that design thinkers are disorganized or undisciplined but that design thinking is fundamentally an exploratory process: done right, it will invariably make unexpected discoveries along the way, and it would be foolish not to find out where they lead. (p.15)

And when it comes to defining innovation, Kumar (2012, p. 1) states that innovation is “a viable offering that is new to a specific context and time, creating user and provider value”. This is similar to the definitions of creativity covered earlier in the workshop. One key distinction is the complexity of innovation which points back to Vehar’s
comment that “innovation requires multiple applications of creative thinking processes” (2008, p. 266).

Why does some innovation fall short? In many cases it is because the innovation or change is not innovative enough. The “Ten Types of Innovation” framework developed by Doblin (Doblin - the ten types of innovation.) and documented by Kumar (2012, p. 34), is a tool that can be used to determine if a planned innovation is comprehensive enough. The tool examines for major categories of innovation. They are: Finance, Processes, Offering (or product), and Delivery. Within each of these there are subcategories that yield ten different types of innovation. This framework can be used to evaluate planned innovations or to understand the innovations of others. For instance, competitors may have seen Apple’s introduction of the iPod as simply an offering. This may have been true initially but with the introduction of iTunes Apple provided a more innovative combination of offering process and delivery in addition to product.

![Figure 4 - 10 Types of Innovation](source: Doblin research (doblin.com))
So while product designers would argue that we must not lose sight of the customers’ needs, design thinkers understand that all these factors affect a successful innovation. Brown’s three-component model of innovation is consistent with this idea of diversity and balance. His three components (Figure 5) are: Desirability, Feasibility, and Viability (Brown & Kätz, 2009, p. 17). While some percentage of innovations can be totally technology driven, more often innovations comprise all of these considerations. Brown notes that a “competent designer will resolve each of these three constraints, but a design thinker will bring them into a harmonious balance” (2009, p. 17).

Figure 5 - Three constraints in balance (Brown)

Clayton Christensen (1997) makes an interesting observation about innovation and failure he notes “the distinction is sometimes made between innovations requiring very different technological capabilities, that is, so-called radical change, and those that build upon well practiced technological capabilities, often called incremental innovations.”
Christensen's research showed that this was not the case. He saw, for the most part, companies were able to negotiate technological leaps forward.

Christensen saw “disruptive” innovations as being highly influenced by a company’s customers. These customers determine the allocation of key development resources. Christensen notes that most disruptive technologies are first developed by the existing players in an industry. The sequence looks like this:

- Company discovers new disruptive technology
- Company asks major customers for their reaction
- Customers say it is not that important. They ask suppliers to focus on improving existing technology.
- Established companies move resources to improving “sustaining” technology.
- New companies embrace the disruptive technology and search for customers for whom the technology really matters.
- New entrants establish new technology and eventually move up market toward the existing players.

Existing players jump on the bandwagon when they see their existing customers eventually developing an interest in the new technology (Christensen, 1997, p. 72-76).

So what is a company to do? The key is a mind shift that opens up the possibility of approaching new sets of customers. Christensen defines it as “the context within which a firm identifies and responds to customers needs, solves problems, procures input, reacts to competitors, and strives for profit” (p. 66). Because it is focused on the needs of
existing customers, a company's existing value network encourages allocation of resources away from disruptive technologies.

To overcome this limitation, Christensen advocates for separate organizations that can focus on the needs of a new and potentially emerging customer base. This is a very foreign thought for most businesses. But not embracing it represents significant barrier to disruptive innovation.

That is not to say that the only good innovation is a disruptive innovation. In fact the bulk of revenue producing innovations are not disruptive. Improvements, new technology to existing customers, finding new customers for existing technology, are all reasonable places for innovation. In fact, these are what most companies call innovation from their perspective.

The key is to understand what type of innovation you are after. Consider a portfolio of different types of innovation. These could range from incremental to breakthrough innovations.

If an organization or individual understands the type of innovation that they are after, it is possible to use creative style to an advantage. Kirton (1976) established a theory and instrument for determining an individual's preference for a type of innovation. In his language, adaptive innovation is more incremental or sustaining. “Innovative” innovation is more breakthrough or disruptive. Kirton's KAI instrument can be used with an individual to determine their preference across this continuum. A similar instrument developed by Robert Rosenfeld (2006) measures a similar continuum and uses the language of Builder and Pioneer. I particularly like this language since the labels builders and pioneers are positively perceived. This helps take away the feeling that one sort of
innovation or the other is superior. Again, understanding and using this knowledge to target the type of innovation desired can be a competitive advantage.

**Workshop literature wrap-up**

The workshop provides perspective on creativity, creative problem solving and innovation combined with design thinking sensibilities. The target audience is graduate design students who have significant exposure to design thinking but are largely unaware of the field of creative studies.

This is a prototype workshop that will serve as a proposal to the new Dean of Academics at ID. It balances theory and practice and will be adapted as input from the school is received.

A small subset of the materials, primarily focused on CPS, was used in a “lunch and learn” presentation to a local business audience on April 23, 2013. It was very well received and provided for an energetic conversation about individual creativity preference and its effect on teams.

**The Website**

This part of the project was more along the lines of carpentry. The goal was to be able to do some basic framing and get into the position where content could be added to an educational website. In searching the web for resources, it quickly became evident that there is no shortage of advice on how to do this. Unfortunately, it is difficult to determine which is good advice and which is not.

I chose to follow the recommendations of a website called [www.conutant.com](http://www.conutant.com) (Conutant | how to create a website.). The author of this website, Tyler Moore, has provided video instruction and recommendations on how to set up a website. Essentially,
I followed these instructions completely to develop the first iteration of the website. At Tyler’s recommendation, I used a service called HostGator (Web hosting services, reseller hosting, VPS hosting, and dedicated servers by HostGator.) to register my website name and to host the website. The website uses WordPress (WordPress.com - get a free blog here.) as its main design tool. After determining that the web address of www.stevehammond.com was unavailable I chose to use my middle initial and create www.steveJhammond.com.

**Non-profit Promotional Video**

While comfortable with technology, I had not explored communication methods like web videos, podcasts and interactive book formats. My concept paper included these as a learning process and to help promote my consulting work. To satisfy my inner geek, I wanted to explore video to communicate ideas and stories about creativity, creative problem solving, design and their application in organizations.

A local entrepreneur and aviation enthusiast was working with local government and developers to develop a plan for an aerospace educational campus. He was looking for help and I was introduced as a potential problem-solving resource. As a result, I joined the advisory board for the project.

The coincidence of the Masters project and joining the board led to an opportunity to combine both. While the project had a compelling story it was told in a static way. To address this gap, I proposed combining the design thinking approach of fast prototyping with video storytelling to produce a short introductory video.

This required learning and combining several skills including:

- Storyboarding the project using available resources
• Copywriting of a short script, describing the elements of the project
• Using static, existing media resources in a visually interesting way
• Learning how to deliver a voiceover (I was the “talent” in this project)
• Developing a basic music soundtrack to accompany the video
• Learning to video and audio edit a complex project with multiple software tools (Keynote, GarageBand, Final Cut Pro)
• Learning how to optimize and upload the video using the Vimeo website

Resources included several hours of instruction in the “One-to-One” program at the Apple Store (Keynote, GarageBand, Final Cut Pro) (Apple retail store - one to one.). I also learned about resources to capture streaming video from the net at KeepVid.com (KeepVid: Download and save any video from youtube, dailymotion, metacafe, iFilm and more!). I also spent entirely too much time browsing the web for materials to use in the first prototype video, so those sources of ideas are not included here. The first prototype is available at http://vimeo.com/62660216. See Appendix C for more information.

The fast prototype generated useful feedback. The next iteration focused on making the content more visually interesting and improving the sound quality and energy level of the voiceover artist. Again, much time was spent researching audio options. This led to equipment and process changes that significantly improved the production. Resources included online sites providing advice on podcasting and audio production along with equipment sources (Podcasting microphone and gear recommendations.; Amazon.com: Audio-technica ATR2100-USB cardioid dynamic USB/XLR microphone: Musical instruments.; Samson microphone boom stand MK-10 - best buy.).
A second iteration is available at https://vimeo.com/63354825.

Summary of Pertinent Literature and Resources

The range of literature and other resources represents the breadth of my interests and the changing nature of learning resources. While many of the resources for the “academic” part of the project were traditional publication resources, web based resources were a part of the mix. In the case of the learning resources required for development of the website and video, many of the resources were online. It has been an interesting and enjoyable process of exploring how to combine these resources effectively. The following bibliography includes resources that were not directly referenced but that I have found helpful in the project.

Selected Bibliography


KAI and judgement-perception dimension of the Myers-Briggs type indicator


Ken robinson - RSA animate on vimeo


**Process Plan**

The main goal of this project was to develop a basis and presence for my consulting work. Prior to the last six months the possibility of consulting in the field of innovation was not in my plans. My career has focused on corporate work with many varied roles within a wide variety of organizations. The common themes have been developing and executing innovative strategies. In the fields of creativity studies and
design thinking, there is potential to vastly improve the innovativeness and execution of organizations.

I see this as potentially developing as a new field of leadership. There are places in large organizations where the skill sets I am developing are recognized and used. These are relatively few and potentially subject to the whims of corporate leadership in the marketplace. This reality has caused me to explore the possibility of full-time consultancy. This project is providing the basis for much of that possibility.

Teaching is an important component of my process. Through my relationship with ID, I have been able to teach about corporate strategy and innovation. The project has developed material for a multi-day workshop covering creativity, creative thinking processes, design, and innovation. This has resulted in a large slide deck that serves as the outline for an offering at ID. It will also serve as material for smaller workshops. An example is the successful “lunch and learn” session on April 23, 2013.

The development of the workshop material took considerably longer than I had planned. Mostly this was a result of thinking and rethinking how to put these elements together in a useful way. The opportunity to prototype these materials did not materialize during the project. Structural changes in the curriculum at ID have limited the availability of staff to review the content. There appears to be an opportunity to offer the material at some time during the 2013-14 academic year.

The website element of the project was an early focus. Using the online resources previously discussed, significant time was spent in getting a basic web presence and website up and running. Understanding how to combine a website and blog took a bit of time. I certainly recognize the value of subcontracting this to a professional. However, it
has been a great learning experience and I plan to continue development on my own, at least for the near future. I plan to populate the website with versions of the materials I have developed during the Masters program.

The last significant element of the project plan is the Aerospace Technology Center video. This was not in the original plan. This opportunity presented itself during the early stages of the project. It allowed me to learn more advanced techniques of video and audio editing. It allowed me to think like a designer. The approach was to fast prototype a presentation based on limited materials. Feedback was then sought out from constituents and the second prototype was developed. During the development of the second prototype, I learned more advanced techniques for all the components of the process.

The most rewarding part of the video project has been the usefulness of the product. It is actively being used to promote the development of the Aerospace Technology Center. I plan to use the tools I have learned in future projects.

**Timeline**

<table>
<thead>
<tr>
<th>Month</th>
<th>Major Tasks</th>
<th>Time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>• Project orientation</td>
<td>5</td>
</tr>
<tr>
<td>Feb</td>
<td>• Reading/Research (notably C. Christensen’s work)</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>• Research Website options (hosting, domain name, tools)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Establish Domain Name (stevejhhammond.com)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Set up website, get basic contact and bio pages in place</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Talk with potential clients or users of project (ID,</td>
<td></td>
</tr>
<tr>
<td>Month</td>
<td>Major Tasks</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>commercial clients)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Invited and attended initial Aerospace project meeting</td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td>• Website research (H2 insert blog, add page content, manage appearance without HTML)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Research design thinking and innovation literature sources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Training in Final Cut Pro and GarageBand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Troubleshooting production problems with Keynote/GarageBand and voiceovers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Podcasting, audio production research and trials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Read 101 Design Methods (Kumar) for cross-field ideas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Produce first prototype video for Aerospace project and post to Vimeo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Received feedback on prototype and used learnings to prepare and equip for next prototype</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Research iBook format as a platform (later put on hold)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Research and purchase audio equipment for improved video, podcasting and other uses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reviewed Business Model Canvas model for possible inclusion in the project</td>
<td></td>
</tr>
<tr>
<td>Apr</td>
<td>• Acquired and installed audio recording equipment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Brainstormed and developed framework for Workshop content and flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Iterated (and iterated and iterated) on the slide content for Workshop</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Completed Workshop slide prototype</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Completed second prototype of Aerospace project,</td>
<td></td>
</tr>
<tr>
<td>Month</td>
<td>Major Tasks</td>
<td>Time (hours)</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>posted and received initial feedback from clients and Mathemagical Cows</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Completed Adopt-a-Project and video review of project for class presentation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Completed drafts and final submission on writeup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Conducted a “Lunch and Learn” session with a client covering FourSight styles and process and Style-Behavior characteristics</td>
<td></td>
</tr>
<tr>
<td>Post Project Submission</td>
<td>• Set up meeting with ID to discuss adding the Workshop to the curriculum</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• Revision and final submission of Project documentation</td>
<td></td>
</tr>
<tr>
<td>Total Project</td>
<td></td>
<td>250+</td>
</tr>
</tbody>
</table>

The total is quite close to the time estimated in the concept paper.

**Outcomes**

The project produced three main products: the materials for a multi-day workshop, a website, and a promotional video. In addition, the process resulted in learning how to develop content and how to deliver it in an engaging way. The iterative nature of the process was an important learning experience. Using a designer’s mindset provided the opportunity to accept the input of others as a positive learning experience rather than criticism. While there is always room for improvement, I have made a lot of progress in this area.

The process also forced me to come to grips with the tendency to include everything in a project. While the workshop content is still rather massive, there are three or four other topics that I would have liked to include. I also realize that the workshop
content will need further editing to fit in the context of the ID curriculum. As it stands, the workshop slides provide good source material for me to draw upon in my consulting and teaching work.

The Workshop

The objective of the workshop is to provide course material for a graduate course at ID. The workshop was designed to be flexible. There is sufficient content for a full semester course, a half semester course, or an inter-session workshop. At the moment, the highest interest at ID is in the CPS process. CPS represents a large segment of the workshop content. There was a great deal brainstorming and organization around the topics to be covered. The Figure 6 shows an example from the wall of my home office.

Figure 6 - Clustered Ideas for Workshop

During the workshop students will gain a deeper understanding of creativity, creative process and innovation. The Pertinent Literature section documents the authors drawn upon for the definition of creativity. The workshop also relies on the work of
Rhodes, Vehar and Puccio (Puccio, Mance, & Murdock, 2011; Rhodes, 1961; Vehar, 2008) to help distinguish the definitions of these three important terms.

The beginning of the workshop focuses on defining creativity and understanding different frameworks about creativity. The students are asked for their definition of creativity and a number of definitions from scholars are introduced and discussed. The importance of creativity is covered by reference to the IBM study of 2010 and a study by Adobe Systems from 2011. The Mel Rhodes definition and framework is introduced and provides an outline for deeper discussions around creativity.

**Figure 7 - Rhodes' Framework**

CPS is introduced by first going deep into the Thinking Skills Model (TSM). We then look at the FourSight model as a framework based on TSM. Assuming that the students will not have completed the FourSight instrument, we use a card sort exercise to introduce the concept of creative style preference (Figure 8).
As an additional insight we discuss the “Ask-Tell, Diverge-Converge” framework introduced by Dr. John Cabra in our CRS 559, *Principles in Creative Problem Solving* course. I have had the opportunity to use this framework in several small workshops and it is very well received. Several slides describing behavior based on these preferences are included in the workshop.

The final major topic is innovation. We discussed the complexity of innovation. I introduce a slide that I developed (Figure 3) that ties together a number of frameworks. The basic message is that there is a continuum of preference for the type of innovation. This was heavily influenced by the work of Kirton (1976) and Smith (2007). The key message is that innovation takes changes of all types from incremental to breakthrough. Alternative language for these types of innovation is introduced, including the concept of “Builder” (or adaptive change agent) and “Pioneer” (as innovative change agent). Further discussion about how this framework can be used to help lead innovation efforts is included in the workshop.
The Website

This part of the project is intended to be the start of an external presence for my consulting work. The main purpose of the process was to develop the framework for the site and populated with some initial information.

The first step was obtaining a domain name and a web host. Actually, the first step was finding a good resource for how to build a website. I was fortunate to find a solid resource in the website www.conutant.com. This site has a number of very good instructional videos about various aspects of developing a web presence. Following its guidance I was able to purchase a domain name and web hosting for my site. After some thought, I chose the domain name stevejhammond.com since stevehammond.com was not available. I then followed the instructions provided to begin to construct my website.

**Figure 9 - Welcome Page to Website**

In addition to biographical and contact information, I included information developed in one of my design courses. That course, Design Communications, included a
project to develop a simple message about a topic. In my case, that was the concept of Deliberate Creativity. I chose that terminology because I felt it was relevant and interesting to the average organizational leader. It was somewhat of a challenge to implement this in a webpage. I learned that formatting a webpage is often not as simple as one would like it to be. Figure 10 is the result of translating the message to a web format. It comes close to the original in both format and content. In implementing this page, I also learned how to go about getting copyright permission for the photo. That lesson will come in handy as I do more development.

![Website Intro to Deliberate Creativity](image)

**Figure 10 - Website Intro to Deliberate Creativity**
The website includes a blog page that currently is unpopulated. Content will be added as I begin to develop my consulting practice.

**The Aerospace Technology Center Promo**

This part of the project was the most fun. A local aviation enthusiast asked me to help move the project forward. The project seeks to build an educational campus and commercial center in the nearby city of Gurnee, Illinois. My contact felt that my creativity and design training would be very helpful to the cause. I saw an opportunity to help develop a clear and concise message in a friendly, video format that would help recruit others to the cause. Knowing that several key constituents would need to be approached in the near future, I propose developing the video.

Using a fast prototyping approach, I used relatively simple tools like Apple’s Keynote to produce the first video prototype. This took about 2 to 3 days of work and yielded a good prototype despite the lack of experience of the voiceover artist. The video was posted to Vimeo, a video sharing website.

![Figure 11 - Video Content Example](image)
Feedback – First Prototype

The initial feedback was positive. Additional feedback was sought from a professional video producer. It provided some significant areas for improvement, not the least of which being a bit more animation from the voiceover talent.

“Most Excellent! Nice job Steve!”

“Outstanding production Steve. This is how the museum/GATF, whatever it'll be referred to, gets off the ground. Raw talent coupled with passion, good minds and a team mentality. I am forwarding this to the Mayor and developer for their input.”

“1. The narrators voice, though it has good speaking tone quality, is a bit 'laid back' and lacks a bit of excitement or enthusiasm that could enhance telling about this 'great new adventure'. I'm not being critical without a purpose. The narrator needs some tone inflections and be a bit more upbeat. As it is, too mono-tone. and puts the listener to sleep.

2. I do not think the font selection is the best (titles and text). A font with many serifs is harder to read (flowery) and causes the viewer to concentrate more on the words than on the message.

3. Suggest the titles be in a slightly different color to help set them apart from the general text and message. Makes the slide more visually appealing.”

Second Prototype

Largely based on the last feedback, I set about learning more about audio production techniques. I moved from recording the audio in one take to developing the audio for each slide individually and editing it together. This taught me a great deal about setting up a preferred workflow for developing a good video and soundtrack. By doing significant research I determined that a better audio setup would add to the quality of the product. I acquired a dedicated microphone of high quality and an audio interface for use with my laptop that allowed me to create a more professional sound. And, I also practiced to improve the inflection of my voice to add some excitement to the video (excitement being a relative term).
Figure 12 shows the audio equipment upgrades. Based on online reviews, I acquired an Audio Technica AT-2100 USB microphone that was quite inexpensive and has excellent sound quality. It can be used as either a USB microphone, allowing it to be used without an audio interface or as an XLR microphone with an interface. Here it is pictured with a Focusrite 2i2 audio interface that provides even higher audio quality and allows for use of two inputs. I learned that a boom mount for the microphone is a must in my situation. It isolates the microphone and provides for much better positioning (you need to be quite close to this mic for the best sound quality).

In addition to the audio and the workflow, I implemented the recommended visual changes and added some motion to the graphics, resulting in the second prototype. The changes resulted in the following feedback:
“My impression...small changes, great results! The narration was more upbeat and the changes in the text are great. It reads so much more comfortably. This resulted in a professional product that is not flashy but very clean looking and impressive. The message is quite clear also.”

“STEVE! this is fantastic! very smooth and polished. (It reminds me the very very small museum my WWII veteran -still living- grandfather set up at the Presque Isle -northern Maine- airport -- he trained at Chanute Field.) My only question is, How can you make it more jazzy in the middle? I found myself thinking about other things about two and a half minutes in... BTW my husband is a video editor, works in Final Cut - Would you like him to look at it? Keep at it!!”

So there is further room for version 3 that will likely be produced after the end of this project.

**Outcome Summary**

The concept paper set out a very aggressive project. From the outset, I recognized that all of the desired outcomes were unlikely to be achieved in the time frame of the course. That said, three solid products were generated. Each product provides a basis for additional products to be developed. Overall the project provides a license to continue to learn and develop in the field.

**Key Learnings**

There are a few high level learnings from the project. They include: my personal creative style involves more thinking than doing; balancing these two is an important life skill; and it is important to be comfortable in one’s own skin and to use that knowledge to find joy and help others. I’m working on that.

As I work to complete this project, I find the perspective provided by a YouTube video by Hile Rutledge (MBTI how judgers and perceivers approach goals.) to be right on point. The essence of his presentation is that Judgers and Perceivers execute tasks on very different paths. These paths can lead to mistrust between the types if not understood and appreciated. My path during this project has been much more in line with the Perceiver
mode of functioning. Rutledge illustrates the paths of these two types toward a 3pm deadline as shown in Figure 13. He provides the insight that it is best not to get between a perceiver and their goal in the last 15 minutes before it is due. Good advice.

![Figure 13 - Judgers and Perceivers Paths to the Same Goal]

**There’s a lot to Consider**

One of the big challenges of this project has been trying to boil the ocean of the fields of creativity, creative process, design and innovation into something useful for managers and leaders in organizations. During this project I have made progress in that direction. Much of the project has been inwardly focused as I have been learning about the fields and their similarities and differences. One result of this project is the course
material for ID. It represents a starting point for finding a good way to present the ocean to design students and others.

The key learning here is that it is important to focus on the user and present them with material they can absorb. The course materials will require further feedback and iteration to be most effective. They represent a workable prototype and will lead to better future versions.

**Balance is Important**

Balance is a consistent theme across much of the material in the project. At a high-level balancing thinking and doing was important. Balancing analytical and intuitive thinking was important. Balancing the preference for adaptive versus innovative change was important.

Understanding where an organization is on a balance scale can help tailor the education and facilitation processes that a practitioner uses. During the project I worked with a large organization on their innovation process. It was clear that they hoped for disruptive change, but not that much. To be of service to them, I needed to tailor my approach to their needs. I confess that this is still a skill that I need to develop more fully.

**TL:DN**

“Too long: did not read.” This is a lesson I have thought about quite a bit. It is certainly an important consideration for communication in today’s world. For example, this paper definitely falls into the “too long” category. On the other hand, the video that I developed for the Aerospace Learning Center took a complex proposal and boiled it down to 4 minutes. The key is understanding how much an audience can absorb. This is another skill to work on.
RX: Use Awesome Coping Skills as Needed

Once a person understands how they prefer to think and do, they can develop great coping skills to help them achieve a balance that will make them more productive. My preference for trying to make connections and using new tools surfaced during the project. That has provided great learnings about storytelling, writing, video and audio production, and working with others.

Some of the awesome coping skills that I need include:

• Deadlines
• Intermediate goals
• Listening skills
• Slowing down, saying less, being concise

Going forward these and other coping skills will be a big part of my capability. More important, I believe the project has helped me understand my strengths and where my excitement lies. Using all of this in a balanced way should help me be more effective and creative as I approach future projects.

Practical Learnings

On the more practical and tactical side, the project has led to a number of learnings. I learned more about video editing. I used GarageBand to develop a voiceover and to compose a soundtrack for my video production. I created a website using online resources alone.

From a client perspective, I learned that initial enthusiasm does not always lead to an opportunity. Yet, it is important to engage clients, listen to their needs, and try to provide them with tools and experiences that can be helpful. If one consistently does this
and keeps an open mind, all sorts of opportunities will eventually begin to surface. For example, at the time of the concept paper it appeared that one of my clients had a promising project for me to include in my Master’s work. That did not materialize but another client opportunity appeared. By being open and willing to be of service, new chances eventually appeared.

**Doing Differently**

The outcome of the project has been satisfying. Looking back, there are some areas that I would approach differently after this learning experience.

- I would reach out to my classmates and colleagues more frequently. They can provide important feedback and encouragement that can drive the project more effectively.

- The same holds true for faculty, advisers, and clients. Less time spent in my own head and more time spent listening to them would probably have helped the project along.

- Setting more deadlines with smaller steps would have been helpful.

- While I kept a log of the key tasks and timing, it might have been helpful to develop a journal during the process. I have tried journaling in the past with limited success. Perhaps a similar tool (a blog?) might be useful.

There were times during the project that I thought little was being accomplished. By reflecting on where I started and where I am, it appears that quite a lot has been done. One final learning is probably the most important. My work at Buffalo State is just a start, a license to continue to learn more and make it useful to others.
Conclusion

This project set out to create learning and organizational development products that would bring together the fields of creativity, design thinking, and creative leadership. That is a tall order but one that is of continuing interest to me. The thinking and doing work of this project has helped me develop a framework for communicating the value of creativity, creative process and innovation to others. That alone makes the project worthwhile and successful.

I also learned valuable skills in storytelling, communication and use of multimedia and web based media. Am I an expert? Decidedly no. Can I use a creative medium to communicate ideas? Clearly yes.

The project has provided me with great content that is well documented and can continue to be developed. I have the beginning of a web presence that admittedly needs additional work. But it is there and can provide a useful base for building awareness of innovation, creativity and creative process. And finally, it has made me aware that I can use my existing talents and experiences along with my more recent knowledge of creativity to help others. The Aerospace Learning Center experience is a great example of this. It will be interesting to see how offering my knowledge to others will affect my life. I do not know where it will lead but I trust it will lead to fulfilling work. We shall see.

What I see myself doing next…

So what is next? I plan to continue to develop my knowledge of the field by teaching, coaching and working with organizations that have problems to solve. In particular, I am looking for problems that require creativity to solve. While I plan to balance the sorts of creativity needed across the adaptive to innovative spectrum, I realize
that my leaning is toward the innovative end. As a pioneer rather than a builder, I will need to use those awesome coping skills to be there for my clients when they need to improve something rather than completely replace it.

Some actions that are ready in the pipeline include:

- Pitching the workshop to ID
- Co-teaching a seminar at IIT in their undergraduate program aimed at developing creative solutions to problems facing athletes at the school.
- Beginning an active marketing process aimed at developing new clients
- Increasing the frequency of my facilitation work with my main commercial client
- Keeping an open mind about employment with individual firms
- Offering my services on a pro bono basis to organizations like the Aerospace Learning Center.
- Staying open to new and interesting opportunities as they arise

I also see myself continuing to build on the education that I have acquired over the past several years. This is almost unavoidable, given my continuing commitment to teaching. There is a great deal of learning that comes from having to teach. And even more that comes from listening to your students. As a closing example, a former design student approached me this past week. His wife and business partner had been approached by a large company interested in acquiring their business. I was able to help them focus on what was important to them. I believe I was really able to make a difference and help them sort out the elements of their decision. We used a combination of creative problem solving and non-directional coaching to help them focus and develop
a plan. In all, it was an immensely rewarding experience and an example of being able to apply the portfolio of creative skills and experiences that I have developed.

My journey in creativity started as a simple question from my wife. “What do you want to do for the next twenty years?” Stay tuned, more to come…
References


Amazon.com: Audio-technica ATR2100-USB cardioid dynamic USB/XLR microphone:


http://www.amazon.com/Audio-Technica-ATR2100-USB-Cardioid-Dynamic-Microphone/dp/B004QJOZS4/ref=wl_it_dp_o_pC_nS_nC?ie=UTF8&colid=3LY82ISE8S896&coliid=ID0QTPMNEE1A1

Apple retail store - one to one. Retrieved 4/17/2013, 2013, from

http://www.apple.com/retail/learn/one-to-one/


Conutant | how to create a website. Retrieved 3/26/2013, 2013, from

http://www.conutant.com/
Doblin - the ten types of innovation. Retrieved 4/16/2013, 2013, from
http://doblin.com/tentypes/


doi:10.1037/h0063487


Kumar, V. (2012). 101 design methods: A structured approach for driving innovation in your organization Wiley.


MBTI how judgers and perceivers approach goals. Retrieved 04/17/2013, 2013, from [http://www.youtube.com/watch?v=KL11OmS1afU](http://www.youtube.com/watch?v=KL11OmS1afU)


Talbot, R. J. (1997). Taking style on board (or how to get used to the idea of creative adaptors and uncreative innovators). *Creativity and Innovation Management, 6*(3), 177-184.


Appendix A – Concept Paper
Creativity and Innovation for Designers and Business

Stephen J. Hammond

International Center for the Study of Creativity
SUNY – Buffalo State
CRS 690 – February 27, 2013
Professor J. Michael Fox
Creativity and Innovation for Designers and Business

Project Purpose and Description

This project will create learning and organizational development products that bring together the fields of creativity, design thinking, and creative leadership in a way that would be useful to a client. The product will most likely be a workshop offering in creative problem solving, creativity, and creative leadership. Ideally, the workshop could be delivered within the project timeframe. Candidate clients under consideration include: the Masters in Design Methods curriculum at the Illinois Institute of Technology Institute of Design and the Innovation Center at a Fortune 100 company. Other options may surface during the project timeframe.

Equally important, the project will develop a presence for a consulting practice. This is a stretch for me. While I have done some consulting, it has been as an adjunct to my career as an employee of a variety of business concerns. Selling myself is not my strength. This project will allow me to focus on communicating my skills and abilities to potential clients. Whether it results in a consulting practice or simply a better me, it is a worthwhile objective.

The project will also provide an opportunity for me to explore a variety of tools for the learning process. For example, websites, blogs, multimedia, and new publishing methods will be explored as adjuncts to the primary purposes of the project. This will provide an opportunity to develop new skills that will be useful in future projects.

This project is about an intersection. The type of intersection is not yet clear. Is it a four-way stop, a T-intersection, a rotary, or some other variation? Parts of this intersection have been under construction for most of my career. Others have been started.
COMMUNICATING CREATIVITY

over the past two to three years as I have been exploring several related fields. I am curious about the potential across the fields of creativity, design, organizational strategy, and leadership. This project will explore that potential.

The overriding theme for the project is innovation. Innovation can have a high level of complexity, yet in retrospect it often looks incredibly simple and elegant. It takes many forms and requires a diverse set of abilities and skills. I see an opportunity to help organizations develop the creativity of their people and innovate more effectively. How can we help organizations and individuals to innovate more easily and frequently? Can we develop training, tools, and techniques that will achieve this end? This project is aimed at developing training and facilitation methods to help organizations innovate.

Why this? Personally, I have been involved in aspects of corporate strategy for over thirty years. During that time I have seen great examples of creativity in the strategy organizations have chosen to pursue. However, I have also seen a great deal of misunderstanding of how creativity might be used to deliver great products and services in a competitive environment. I would like to help change that by incorporating knowledge of creativity, design and leadership into strategy development. Globally, there appears to be great interest in creativity. The oft-quoted IBM study from 2010 states “Creativity is the most important leadership quality, according to CEOs.” More importantly, it recommends that CEOs capitalize on complexity by embodying creative leadership, reinventing customer relationships, and building operating dexterity. These are admirable goals. This project aims to use the intersection of several fields to help achieve these goals.
**Literature and Resources**

Sources to be used in the project come from literature in the fields of design, creativity, leadership, and strategy. Additional resources are drawn from the course work that I have pursued at both SUNY Buffalo State and the Illinois Institute of Technology, Institute of Design (ID). I will also draw information from the Corporate Strategy for Designers course that I have designed for ID. A preliminary list of these resources is included in the bibliography of this document.

The project will draw from authors, teachers, and practitioners within the fields. An initial list of these resources includes:

<table>
<thead>
<tr>
<th>Authors</th>
<th></th>
</tr>
</thead>
</table>
| Creativity | Amabile  
Vehar  
Puccio  
Gryskiewicz  
Firestien  
Miller |
| Design | Brown  
Martin  
Kumar  
Kelley |
| Innovation | Kantor  
Smith  
Shook |
| Strategy | Porter  
Christensen  
Hamel  
Osterwalder et al. |
| Leadership | Puccio  
Northouse |
| Teachers, Practitioners | ICSC Staff  
ID Staff, including Mayfield, Musick, Alexis, Erwin, Forlano, Costello  
Client Innovation Center Staff |
Process Plan

The project begins with this document in the process of considering options. Approaches have been made to the potential clients and initial interest has been confirmed. However, experience has indicated that the ability to follow through in a timely manner is affected by the day today operations of the clients. At a minimum, I will be seeking a commitment from the clients to evaluate the product I develop and collaborate on its development. Ideally, they will use the product (that may include my involvement in delivering a workshop) and will be able to give feedback and evaluation of a “live” offering.

It is helpful to break the project into thirds. During the first third the focus will be on literature review and extensive reading, meeting with clients, and exploring potential communications tools including websites, blogs, etc. The second third will be focused on prototyping tools and techniques based on the work done during the first third and based on my professional and academic experience. The remainder of the project will be refining the product based on feedback from clients, colleagues, and academic advisors.

Project Timeline

A draft timeline is shown. Detailed items are shown for the first four to five weeks and later weeks are less detailed. An example of the detail for February is shown.
A more summarized version is show below:

<table>
<thead>
<tr>
<th>Month</th>
<th>Week Ending</th>
<th>Focus</th>
<th>Major Actions</th>
<th>Hours</th>
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<td>Roadmap</td>
<td>• Draft all elements of Roadmap</td>
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<td>• First pass at themes, content</td>
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<td>• Develop Project Calendar</td>
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<td></td>
<td>• Review Literature</td>
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<td></td>
<td>2/14</td>
<td>Getting Started, Engaging Clients</td>
<td>• Discussions with ID and Client</td>
<td>23</td>
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<td>• Begin web/blog/multimedia learning</td>
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<td></td>
<td></td>
<td></td>
<td>• Develop framework for multiple disciplines</td>
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<td></td>
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<td>• Literature – review and reading</td>
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<td></td>
<td>2/21</td>
<td>Revising goals, deliverables. Refining Roadmap</td>
<td>• Apple Final Cut Pro Training Session</td>
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<td></td>
<td></td>
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<td>• Establish and refine website</td>
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<td></td>
<td></td>
<td>• Literature</td>
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<td>• Multimedia experimentation</td>
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<td>2/28</td>
<td>Roadmap, Primary Project Choice, Past Project</td>
<td>• Complete final Roadmap</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• Identify past project for review</td>
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<td></td>
<td>• Decide on primary project goal</td>
<td></td>
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<td>• Begin work on primary project</td>
<td></td>
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<td>Month</td>
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<td>Focus</td>
<td>Major Actions</td>
<td>Hours</td>
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<tr>
<td>Mar</td>
<td>3/7</td>
<td>Proposal draft for Primary Client, Begin Project Draft</td>
<td>• Explore iBook Format • Arrange times with clients for review and conduct if able • Begin drafting and continue content development • Apple – GarageBand session for possible podcast or audio development</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3/14</td>
<td>Drafting and content development</td>
<td>• Drafting and multimedia content prototypes • Continued interaction with clients</td>
<td>15</td>
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<tr>
<td></td>
<td>3/21</td>
<td>Preliminary feedback from sounding board partner, clients.</td>
<td>• Get feedback from clients, revise • Dig into past project review • Continue development of content</td>
<td>20</td>
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<tr>
<td></td>
<td>3/28</td>
<td>Project Draft, Presentation, Content Review</td>
<td>• Reality check on workshop development • Translating workshops to a formal written document suitable for submission to Digital Commons • Review content</td>
<td>25</td>
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<tr>
<td>Apr</td>
<td>4/4</td>
<td>Draft Final Project</td>
<td>• Pulling it all together</td>
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<tr>
<td></td>
<td>4/11</td>
<td>Presentation</td>
<td>• Develop class presentation • Continue to refine Final Project materials • Receive feedback and learn from it</td>
<td>15</td>
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<tr>
<td></td>
<td>4/18</td>
<td>Final Project</td>
<td>• Complete it</td>
<td>25</td>
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<tr>
<td></td>
<td>4/25</td>
<td>Presentation</td>
<td>• Be prepared to present • Look into ways to review others from a distance</td>
<td>15</td>
</tr>
<tr>
<td>May</td>
<td>5/2</td>
<td>External Reviews and Evaluations</td>
<td>• Look into opportunities for review with ID, Client and possibly others • Get feedback for future revisions (for ongoing use in my work)</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>5/7, 5/14</td>
<td>Continued feedback and refinement</td>
<td>• TBD</td>
<td>20</td>
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</tbody>
</table>
Products/Outcomes

The following are an initial list of products and outcomes expected from the project. This list is expected to change and some elements may not survive into the final project. Additional elements may be added as the project evolves.

CPS for Designers Workshop

This course will be an introduction to creativity focused on using concepts taught at Buffalo State reframed for a design audience. Designers can use CPS methods in all aspects of the design process taught at ID. The ID process can be described as (1) observe, (2) analyze, (3) synthesize/develop, and (4) build/prototype. In a way, this process has been used to frame this project. While the design process is a creative process, I have observed design students struggle in each of these steps as they attempt to work with each other in developing solutions to design problems. They would benefit from a deeper knowledge of individual creativity and the steps of creative problem solving.

CPS Workshop for a Non-Academic Client

Responding to interest from a commercial client, the specifications for this workshop will be developed during the project. The client has indicated an interest in developing content aimed at effective facilitation. This is a change from my initial draft and is still in the scope of the project.

An additional possibility has emerged with a local venture that is exploring an educational project focused on aerospace and technology education for youth in the region. This may present an opportunity to use materials developed in this project.

Multimedia and Communication Tools

This outcome reflects my ongoing curiosity about communication tools. That interest includes storytelling, visual media, and use of web-based technology. At this point, I can only give some examples that are under consideration. I would like to develop a web presence for my independent consulting activities. This would have both a learning and career benefit. I would also like to expand my knowledge of video editing tools that would include iMovie and Final Cut Pro. These would be used in some form for educating participants and clients. I have a rudimentary knowledge of these tools today and hope to improve that during the project. I may also look into publishing of some form of my learnings using the iBooks platform available from Apple.

At this stage delivering all of the content above is a bit of a wish list. It provides a good starting point and I expect that there will be an increasing focus and narrowing of
the project deliverables as time progresses. In keeping with CPS, I also expect that there will be times where diversion thinking will be required to reframe the project.

**Personal Learning Goals and Evaluation**

**Learning Goals**

- Experience in adapting CPS education to varying audiences (designers, commercial clients, not-for-profits)
- Synthesizing materials from the fields of design, creativity, innovation, and strategy in a way that is useful to clients and students.
- Experimenting with a variety of methods of storytelling and communication in delivering creativity content to workshop participants.
- Exploring creative leadership in more depth as a part of developing these workshops.

**Evaluation Criteria**

Success in the project will involve both process and output. In the early stages, accomplishing the tasks in the timeline will help keep the project on time and moving forward. Since I am an Ideator, diverging comes easily. The timeline will assist in converging in a timely way. This draft is an example of timeline driven convergence. It’s a good thing.

As I have worked with designers, one distinction between designers and students of creativity studies is the designer’s desire to “make”. Designers have making as a critical part of what they do. I will try to adopt this mentality during this project.

Things I hope to make during the project:
• A personal blog or website aimed at sharing my perspective on creativity and innovation

• A set of presentations for a class in creativity aimed at design students

• A set of presentations for a commercial client desiring to improve the creativity of the attendees of an internal workshop

• A document that supports the other products of the project in a multimedia format like the iBooks format.

I will also look to others for feedback and evaluation of the products and my process. A classmate of mine has offered to spend some time reviewing my project with me. My main feedback will come from faculty members at ID and colleagues at my commercial client. While they may not be able to commit to using any products developed in this project during the course, their feedback will help me develop a solid product. My plan would be to execute the course or to present the course intent and content to my client and ID colleagues.
Bibliography


FOURSIGHT - your thinking profile, innovation tools and team assessments


Rowe, P. G. *Design thinking* The MIT Press.


Appendix B – Workshop Slides
**Welcome**

- Your Name
- What was your very first job?
- What important life lesson did you learn?

**Workshop Goals**

- Deeper understanding of creativity, creative process and innovation
- Provide practical frameworks that foster innovation in groups and individuals
- Explore how using creative understanding and processes can help you innovate
- Introduce some tools you can use right away to be more innovative

**Key Concepts Covered**

- Creativity
- Creative Process
- Innovation
- Personal and Organizational Effects
- Tools You Can Use

**Framing Creativity, Creative Thinking and Innovation**

“And while both require a creative thinking process, the innovation requires multiple applications of creative thinking processes to guide it to launch. While creativity is about creating a creative product, the innovation requires the introduction of it frequently in multiple copies, and in order for that to occur, that requires strategies to get the innovation out to the world. And while creativity takes place not in a vacuum, but in a constrained press, the implementation does as well. Plus it must exist in the broader external press of the marketplace that determines its success or failure.” (Vehar, 2008, p.266)
Tool #1: Blue Slips

- “Landscape” Mode
- One Idea per Slip
- Heading
- Brief statement of idea

LET’S PRACTICE!

H ere’s one great idea I want to capture

What is creativity?

Some definitions of creativity

- “making a change that sticks (for a while)” (R. Talbot, 1997, p. 181)
- “refers to the abilities that are most characteristic of creative people” (Guilford, 1950, p. 444)
- “creativity is often described as the production of original ideas that are valuable or useful” (Creativity 101)
- “Perhaps for most it denotes the ability to bring something new into existence, while for others it is not an ability, but the psychological processes by which novel and valuable products are fashioned.” (MacKinnon, 1978, p. 46)

Adobe State of Creativity Study (April, 2012)

Common elements

- Novel or original
- Of value, useful, having a purpose

Everyone has the capacity to innovate. It’s just that somewhere around the fourth grade most of us stop thinking of ourselves as creative, so our ability to innovate atrophies.

— David Kelly  
Founder, IDEO
COMMUNICATING CREATIVITY

At least half agree that they are increasingly being expected to think creatively at work

<table>
<thead>
<tr>
<th>Agree</th>
<th>TOTAL</th>
<th>US</th>
<th>UK</th>
<th>GERMANY</th>
<th>FRANCE</th>
<th>XFINI</th>
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<td>9%</td>
<td>11%</td>
<td>7%</td>
<td>10%</td>
<td>9%</td>
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<td>There is a decline in original creation</td>
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<td>1%</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
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<tr>
<td>Children are becoming more creative as they spend more time online creating what they imagine</td>
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<td>2%</td>
<td>5%</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Being creative is still rewarded for an elite community</td>
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<td>1%</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
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<tr>
<td>Being creative is rewarded for an elite community</td>
<td>2%</td>
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<td>3%</td>
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</table>

ADOBE STATE OF CREATIVITY STUDY (APRIL, 2012)

Mel Rhodes Definition

“The word creativity is a noun naming the phenomenon in which a person communicates a new concept (which is the product). Mental activity (or mental process) is implicit in the definition, and of course no one could conceive of a person living or operating in a vacuum, so the term press is also implicit.”

Mel Rhodes, The Phi Delta Kappan, 1961, p. 305

Rhodes also said:

“Indeed, the words creative and creativity have been loosely used and overused.”

Interconnected Terms

Smith’s View

- Creativity, Innovation, Continuous Improvement
- “It struck me that this is all about ideas. Creativity is about having ideas and innovation and continuous improvement are about implementing ideas” (R. Smith, 2002, p. 18)
- “Ideas are all about change.” (R. Smith, 2002, p. 18)

A Similar View from Vehar

“Creative thinking, creativity, and innovation are separate and distinct things. Creative thinking is a process that can be taught, creativity is a phenomenon about which we can teach, and innovation is more than creativity.” (J. Vehar, 2008)

Rhodes’ 4 P’s of Creativity

PERSON

PROCESS

PRODUCT

“PRESS” OR PLACE (ENVIRONMENT)

Adapted from Mel Rhodes, Phi Delta Kappan, 1961
Rhodes’ 4 P’s of Creativity

Elements of creative person
- Sensitive to problems
- Generate lots of ideas
- Are flexible in their thinking
- Diverge or generate a wide range of ideas
- Have the ability to redefine concepts

Elements of creative person
- Creativity and intelligence are not highly correlated
- Above an IQ of 120, IQ and creativity appear to be relatively independent
- “But is not an individual who thinks differently from his associates and from sources of information doing his own thinking? And is he not the person who is likely to be creative?” (Rhodes, 1961, p.308)

Terms used by the creativity community
- Fluency - lots of ideas quickly
- Flexibility - diverse and remote connections
- Originality - different
- Elaboration - depth of detail

What do you think makes a creative person?
Traits of creative people*

- Sensitive
- Not motivated by money
- Sense of destiny
- Adaptable
- Tolerant of ambiguity
- Observant
- Ask questions
- Original

- Perceive the world differently
- See possibilities others do not
- Can synthesize and elaborate
- Able to fantasize
- Flexible
- Fluent

- Imaginative
- Ingenious
- Energetic
- Sense of humor
- Self-actualizing
- Curious
- Self-knowledgeable
- Specific interests

- Divergent thinker
- Open-ended
- Independent
- Severely critical
- Non-conforming
- Confident
- Risk-taker
- Persistent

*Not all traits apply to all creative people.


Creativity Research: A Historical View
(Cambridge Handbook of Creativity, Runco and Albert, 2010)

- Five basic questions of the 19th Century
  - What is creativity?
  - Who has creativity?
  - What are the characteristics of creative people?
  - Who should benefit from creativity?
  - Can creativity be increased through conscious effort?

- Ideas of associative thinking, making connections and divergent thinking were all present in the 1800’s

- High Intelligence (e.g., IQ) was thought to be required for creativity

Research - More Recent History

- Where to start? Study persons recognized as “creative.” What makes them different from others?
- Where might this be valuable? In the 1940’s, much work was aimed at military and intelligence screening (MacKinon’s OSS work)
- Early work began with psychology studies (early 1900’s)
  - Developed methods of assessment
  - Military interest during World War II - OSS Assessment Centers
  - Studied persons who were recognized as “creative” and tried to understand why.

- After WWII - Lots of analysis of people recognized as exceptionally creative
- IQ was less related to creativity than was previously thought
- Most influential factors were developmental and family.
- What about creativity that people might not immediately recognize or that is less widely noticed?

Kinds of Creativity

- Everyday Creativity - “human originality at work and leisure across the diverse activities of everyday life” (Richards, 2010, p. 189)
- Big-C and little-c creativity
- mini-c, little-c, Pro-c, and Big-C (Kaufman, Beghetto)
  - mini-c - personal and developmental
  - little-c - unique and recognized locally
  - Pro-c - professional and recognized
  - Big-C - eminently recognized and celebrated

FourSight™ - Understanding creative preference to improve performance
FourSight combines insights about personal thinking preferences with the Creative Problem Solving process.

Person meets process
- Most of us prefer some steps over others
- Biases show up as strengths and blind spots

SO...WHAT’S A CLARIFIER?
Great at clarifying the problem
Takes time to look at lots of data
Wants to make sure to address the right problem
Gathers information
Looks at data details
May over analyze and not move forward

Clarifiers
are...
- focused, methodical, orderly, deliberate, serious, organized
need...
- order, the facts, an understanding of history, access to information, permission to ask questions
among others by...
- asking too many questions, pointing out obstacles, identifying areas that haven’t been well thought out, overwhelming people with information, being too realistic
SO...WHAT'S AN IDEATOR?

Looks at the big picture
Toys with ideas and possibilities
Stretches the imagination
Takes an intuitive approach
Thinks in more global terms
May overlook the details

Ideators are...
playful, imaginative, social, adaptable, flexible, adventurous, independent
need...
room to be playful, constant stimulation, variety and change, the big picture
annoy others by...
drawing attention to themselves, being impatient when others don't get their ideas, offering ideas that are too off-the-wall, being too abstract, not sticking to one idea

SO...WHAT'S A DEVELOPER?

Puts together workable solutions
Plans steps to implement an idea
Analyzes and compares potential solutions
Examines the pluses and minuses of an idea
May get stuck in developing the perfect solution

Developers are...
reflective, careful, pragmatic, patient, dedicated, discerning
need...
a chance to consider and evaluate the options, time to craft and develop ideas into useful solutions
annoy others by...
being too nit-picky, finding flaws in others' ideas, getting locked into one approach

SO...WHAT'S AN IMPLEMENTER?

Gives structure to ideas
Brings ideas come to fruition
Focuses on workable solutions
Takes the ‘Nike’ approach (“Just do it”)
May leap to action too quickly

Implementers are...
persistent, decisive, determined, assertive, action-oriented
need...
the sense that others are moving just as quickly, timely responses to their ideas, control
annoy others by...
being too pushy, readily expressing their frustration when others do not move as quickly, overselling their ideas
COMMUNICATING CREATIVITY

SO...WHAT’S A INTEGRATOR?

Easily relates to each preference
Even energy for all four preferences
Concerned about group harmony
Bridges style differences and plugs gaps
May lose own voice by pleasing others

Integrators are...
steady, flexible, inclusive, team players, stabilizing influences
need...
cooperation, collaboration, energy from others, to feel others are committed to the challenge
annoy others by...
pointing out what's not being done, not allowing their voices to be heard, being overly flexible, becoming peace-makers on teams

How do you like to think and solve problems?

Problem Solving Preference

Given what you've just learned about the various FourSight preferences:
1. Write the four creative preferences on a separate Post-It notes
2. Choose the preference that seems most like you
3. Choose the preference that seems least like you
4. Sort the remaining preferences relative to your initial selections
5. Share your sorted preferences and discuss your rationale for your sort with a partner

Manufacturing Group

Internal Innovation Group
Knowing profiles...why is this important?

By knowing more about your problem-solving preference and others’ preferences, you can:
- Leverage style differences
- Enables you to honor others
- Build better teams
- Short circuit conflict
- Improve performance
- Become a creative powerhouse

Different behaviors are associated with each stage

Which do you prefer?

Ask or Tell?

Structure Tasks or Generate Ideas?

When influencing, the degree to which you ASK or TELL determines your assertiveness.

A Preference for Divergent or Convergent Thinking?

Adapted from TRACOM Corp. (1998); Merrill & Reid (1981)
The intersection of two continuums create four primary approaches to problem solving.

Approaches to problem solving

- Ideator
  - Ask
  - Develop
  - Implement
  - Clarify
  - Tell

- Developer
  - Ask
  - Develop
  - Implement
  - Clarify
  - Tell

- Implementer
  - Ask
  - Develop
  - Implement
  - Clarify
  - Tell

- Clarifier
  - Ask
  - Develop
  - Implement
  - Clarify
  - Tell

Each profile has different needs.

Profiles have preferred styles and speeds.

Under stress, behaviors are different.

If pushed too far, they...
Rhodes’ 4 P’s of Creativity

- PERSON
- PROCESS
- PRODUCT
- "PRESS OR PLACE (ENVIRONMENT)"

Adapted from Mel Rhodes, Phi Delta Kappan, 1961

Wallas’ model of creative process

- Preparation - define and consciously attempt to solve
- Incubation - no solution; cease conscious work; nonconscious continues
- Illumination - a moment of insight
- Verification - refine and confirm the solution/insight

Wallas (1926)

Incubation trivia

- It’s real and has been the subject of over 50 studies
- Most studies focused on convergent incubation, narrowing to an end
- Incubation can help divergent thinking as well
- The nature of activity during the incubation period is important. It needs to use a different mental process to be most effective

Ellwood, S. et al. (2009)

The Thinking Skills Model

- Diagnostic - gathering data to determine the appropriate next process step
- Feeling Skill - “Mindfulness” - attending to thoughts, feelings, and sensations that affect the situation.

TSM - Assessing the Situation

- Diagnostic Thinking - gathering data to determine the appropriate next process step
- Feeling Skill - “Mindfulness” - attending to thoughts, feelings, and sensations that affect the situation.

Adapted from: Pucil, Mance, & Murdock (2011)
TSM - Exploring the Vision

- Visionary Thinking - Develop a vision of the desired outcome.
- Feeling Skill - "Dreaming" - Imagine hopes and desires as possible.

Adapted from: Puccio, Mance, & Murdock (2011)

TSM - Formulating Challenges

- Strategic Thinking - Identify the gaps that must be closed to achieve the desired outcome.
- Feeling Skill - "Sensing Gaps" - Become consciously aware of discrepancies between current state and desired future.

Adapted from: Puccio, Mance, & Murdock (2011)

TSM - Exploring Ideas

- Ideational Thinking - Generate novel ideas that address challenges.
- Feeling Skill - "Playfulness" - freely toying with ideas.

Adapted from: Puccio, Mance, & Murdock (2011)

TSM - Formulating Solutions

- Evaluative Thinking - using assessment tools to move from ideas to solutions.
- Feeling Skill - "Avoiding premature closure" - Resisting the urge to push for a decision.

Adapted from: Puccio, Mance, & Murdock (2011)

TSM - Exploring Acceptance

- Contextual Thinking - Increasing the likelihood of success by understanding conditions that will help or hinder success.
- Feeling Skill - "Sensitivity to Environment" - Awareness of physical and psychological surroundings.

Adapted from: Puccio, Mance, & Murdock (2011)

TSM - Formulating a Plan

- Tactical Thinking - Devising a plan with specific, measurable steps.
- Feeling Skill - "Tolerance for Risks" - Ability to move through failure or setbacks.

Adapted from: Puccio, Mance, & Murdock (2011)
Apple & Orange

The Triune Brain

The heartbeat of CPS

Roles in CPS

- Client - “owns” a problem or challenge. Challenge should be important, within the influence of the owner and require imagination to resolve.
- Resource Group - diverse group providing ideas and insights to the client
- Facilitator - CPS process expert
- Process Buddy - Assistant facilitator who manages logistics and allows facilitator to concentrate on the client

What does a facilitator facilitate?

- Works with client to determine where the need is across the CPS process continuum.
- Each step diverges and converges to generate creative solutions and implementation plans

<table>
<thead>
<tr>
<th>Exploring the Vision</th>
<th>Formulating Challenges</th>
<th>Exploring Ideas</th>
<th>Formulating Solutions</th>
<th>Exploring Acceptance</th>
<th>Formulating a Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generates a goal, wish, or challenge</td>
<td>Proposes the right problem to solve</td>
<td>Generates and selects ideas that may solve the challenge</td>
<td>Improves and details the solutions</td>
<td>Analyzes what will help implement</td>
<td>Detailed plan to implement (metrics/ time)</td>
</tr>
<tr>
<td>I wish...</td>
<td>How to...</td>
<td>In what ways might we...</td>
<td>What ideas might address the challenge?</td>
<td>What I see us doing is...</td>
<td>Analysis of what will help and hinder execution</td>
</tr>
</tbody>
</table>

THE CREATIVE HEARTBEAT: THE CORE TO THE CREATIVE PROCESS

DIVERGE

CREATE CHOICES

MAKE CHOICES

CONVERGE

“What could it be?”

“What should it be?”
When you diverge...
- Defer judgment
- Strive for quantity
- Seek wild and unusual ideas
- Build on other ideas

When you converge...
- Use affirmative judgment
- Be deliberate
- Revisit objectives
- Be open to novelty
- Work to improve options

Task

Ideate
What are all the ways to improve a recliner?

4 basic questions for problem solving
- What’s the challenge?
- What are all the ways to meet the challenge?
- How, specifically, do you plan to meet the challenge?
- How will you get it done?
**Four Thinking Stages**

- **Clarify Situation**
  - What's the challenge?
  - Pinpoint the problem to solve

- **Generate Ideas**
  - What are all the ways to meet the challenge?
  - Come up with new ideas

- **Develop Solutions**
  - How, specifically, do you plan to meet the challenge?
  - Refine ideas into strong solutions

- **Implement Plans**
  - How will you get it done?
  - Put the plan into action

**Divergent and Convergent Tools**

**Divergent Tools**
- I wish, It would be great if...
- Why? What’s stopping you?
- Brainstorming
- Mindmapping
- brainstorming
- Forced Connections
- Excursions
- SCAMPER

**Convergent Tools**
- Ownership, Motivation, Imagination
- Highlighting
- Success Zones
- Clustering
- Restating
- Card Sort
- Evaluation Matrix
- Targeting

**Assess the Situation**

Determine where you are
- gather data
- assess the problem
- enter the process
- assess the climate
When you are assessing you use diagnostic thinking.

**A Good Fit for CPS**

- **Ill-Defined:** There is no single pathway to a solution
- **Ambiguous:** Lack of clarity
- **Complex:** Multiplicity of key decision factors
- **Volatile:** High rate of change
- **Uncertain:** Unclear about the present situation and future outcomes
- **Novel:** The situation is either changing or new
- **Repeating:** An effective solution has not been found

**Assess the Problem**

- Predicament
- Opportunity
- Formulaic
- Maintenance

**Enter the Process**

<table>
<thead>
<tr>
<th>If...</th>
<th>Where to start (Process Step)</th>
<th>How to Start (Tips on phrasing the task)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The problem is unclear and you need to identify the specific barriers or obstacles</td>
<td>Clarify</td>
<td>Start with a goal statement beginning with: Wouldn’t it be nice if...</td>
</tr>
<tr>
<td>You have identified a specific challenge(s) that must be addressed</td>
<td>Ideate</td>
<td>Start with a challenge statement that begins with: How to... How might... In what ways might... What might...</td>
</tr>
</tbody>
</table>
Enter the Process

<table>
<thead>
<tr>
<th>If...</th>
<th>Where to start (Process Step)</th>
<th>How to Start (tips on phrasing the task)</th>
</tr>
</thead>
<tbody>
<tr>
<td>You have an idea and you need a workable solution...</td>
<td>Develop</td>
<td>Start with a summary of the idea with: What I/we see ourselves doing is...</td>
</tr>
<tr>
<td>You have a proposed solution and you wish to carry it out...</td>
<td>Implement</td>
<td>Start with a description of proposed solution with: What I/we NOW see ourselves doing is...</td>
</tr>
</tbody>
</table>

CLARIFY

- Identifying the challenge
- define a goal
- gather data
- formulate the challenge

When you clarify you use strategic thinking.

Clarify - Vision

CLEARLY STATE A DESIRED END STATE

Explore Wishes That are...

| I wish... | Broad – General not specific |
| It would be great if... | Brief – Short; Think book title |
| I wonder if... | Beneficial – Positive; Focus on what you want |

Task - List some

Clarify - Challenge

IDENTIFY THE CHALLENGE TO ADDRESS

<table>
<thead>
<tr>
<th>Formulate a Challenge</th>
<th>That ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to...? (H2)</td>
<td>• Addresses the core of the problem</td>
</tr>
<tr>
<td>How might...? (HM)</td>
<td>• Would lead to a breakthrough</td>
</tr>
<tr>
<td>In What Ways Might...? (IWWM)</td>
<td></td>
</tr>
<tr>
<td>What might be all the ...? (WMBAT)</td>
<td></td>
</tr>
</tbody>
</table>
Task - Brainstorm Some

Initial Evaluation

HITS
- QUICKLY IDENTIFIES CONSENSUS
- DEMOCRATIC – ROLE/TITLE BLIND

CHAMPIONING
- IDENTIFIES IDEAS THAT HAVE A PASSIONATE OWNER
- RESPONSIVE TO INDIVIDUAL VISION

Tips for Hits
- Use dark colors to indicate hits (dots, checks, stamps, etc.)
- Hit about 10%
- Purposefully seek novelty

Qualities of a Hit
- Clear
- Addresses the challenge statement
- Stands out
- Interesting
- Workable
- “Sparkles”

Task - Hit Some and Select a Challenge

Ideate

Generating ideas
- think up lots of options
- explore new combinations
- build on ideas

When you ideate you use ideational thinking.

GENERATE MANY AND VARIED IDEAS

Explore Ideas
Ensure you...
- Let go of barriers
- Follow divergent guidelines
- Remain relevant to the clarified challenge statement
COMMUNICATING CREATIVITY

SCAMPER
- SUBSTITUTE
- COMBINE
- ADAPT
- MODIFY/MAGNIFY/MINIFY
- PUT TO OTHER USES
- ELIMINATE
- REARRANGE

Task - Brainwrite Some
Cluster Some

Task - Brainwrite Some

Develop
Bringing ideas to life
- evaluate & strengthen ideas
- craft ideas into solutions
- make good ideas great

When you develop you use evaluative thinking.

Develop

Develop a well refined solution

Evaluate the Solution
Ensure you…
- Develop specific, measurable, positive criteria
- Follow convergent guidelines

How well does this solution meet the challenge statement?

POINt

Pluses
What are the idea's Positives or Pluses as it stands now?

Opportunities
What opportunities are there? "It might, it could"

Issues
What are the issues, stated as "How to's", etc.?

New thinking
Ideas that address issues or exploit pluses and opportunities

Task - POINt our WWSODI Statement
Develop

Develop a well-refined solution

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Options</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget of $250k</td>
<td>100'x100' back yard</td>
<td>4 bedrooms</td>
<td>Accessible from work</td>
<td>Good Schools</td>
<td>Intangibles</td>
<td>Total Rating Scale</td>
<td></td>
</tr>
<tr>
<td>1 = POOR</td>
<td>2 = NOT GOOD</td>
<td>3 = OKAY</td>
<td>4 = GOOD</td>
<td>5 = EXCELLENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 3 2 1 4 4 2 14</td>
<td>24 5 4 2 5 4 24</td>
<td>16 1 4 3 4 1 3</td>
<td>16 3 2 1 2 3 1 12</td>
<td>14 1 4 1 1 4 3</td>
<td>14 1 4 1 1 4 4 12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Converge using analysis tools like an Evaluation Matrix

Implement

Giving ideas legs
- explore acceptance
- make a plan
- get into action
When you implement, you use tactical thinking.

Assister-Resistor

Goal: Train CPS facilitators for the organization.

<table>
<thead>
<tr>
<th>Element</th>
<th>Strongly Assist</th>
<th>Moderately Assist</th>
<th>Neutral</th>
<th>Moderately Resist</th>
<th>Strongly Resist</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>X O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Show the value of CPS</td>
</tr>
<tr>
<td>VP R&amp;D</td>
<td>X O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Provide examples of innovation</td>
</tr>
<tr>
<td>Available Budget</td>
<td>X O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Demonstrate return on investment, look for savings</td>
</tr>
<tr>
<td>Participant Time</td>
<td>X -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Link to Objectives</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Application to CDI</td>
<td>X O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Show examples of best practice and application</td>
</tr>
</tbody>
</table>

Implement

Develop an action plan

Check for...

<table>
<thead>
<tr>
<th>Momentum</th>
<th>Is it focused on action?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attainable</td>
<td>Is the activity possible given resources?</td>
</tr>
<tr>
<td>Impact</td>
<td>Does it make progress against the solution?</td>
</tr>
<tr>
<td>Measurable</td>
<td>Will you be able to measure progress?</td>
</tr>
<tr>
<td>Partner</td>
<td>Does it leverage the support of others?</td>
</tr>
</tbody>
</table>
**Action Plan**

<table>
<thead>
<tr>
<th>Near Term</th>
<th>Owner</th>
<th>Due</th>
<th>Report/Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>Duration</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mid Term</th>
<th>Owner</th>
<th>Due</th>
<th>Report/Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>Duration</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long Term</th>
<th>Owner</th>
<th>Due</th>
<th>Report/Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
<td>Duration</td>
<td></td>
</tr>
</tbody>
</table>

Whew!!!

**Rhodes’ 4 P’s of Creativity**

- PERSON
- PROCESS
- PRODUCT
- "PRESS" OR PLACE (ENVIRONMENT)

Adapted from M.O. Rhodes, Phi Delta Kappan, 1981

**Stimulants and obstacles to creativity**

- 6 Stimulants
  - Organizational encouragement
  - Supervisory encouragement
  - Supportive work groups
  - Freedom
  - Sufficient resources
  - Challenging work
- 2 Obstacles
  - Organizational impediments
  - Workload pressure

**Creativity Crushers**

Over 90% of both positive and negative meaning is conveyed by tone of voice, body language, and other non-verbal methods of communication

4:1 praise-to-criticism ratio to remain on track

8:1 praise-to-criticism ratio to advance
Progress Principle Findings

- Self-efficacy - "a person’s belief that he or she is individually capable of planning and executing the tasks required to achieve desired goals” (p.80)
- Progress is key to “inner work balance” and organizational effectiveness
- “Negative team leader behaviors affect inner work life more broadly than do positive team leader behaviors.” (p.80)
- Setbacks and negative events are more powerful than progress.

Amabile & Kramer, 2011

Progress Principle Findings

- Meaningful - work that you perceive as contributing to something or someone who matters.
- Catalysts to improve inner work life:
  - Setting clear goals
  - Allowing autonomy
  - Providing resources
  - Giving enough time - but not too much
  - Help with the work
  - Learning from problems and successes
  - Allowing ideas to flow

Amabile & Kramer, 2011

Rhodes’ 4 P’s of Creativity

Adapted from Mel Rhodes, Phi Delta Kappan, 1981

Rhodes’ 4 P’s of Creativity

Adapted from Mel Rhodes, Phi Delta Kappan, 1981

Actually, we’ll focus on innovation...

Innovation Style Preference
Everyone is creative. How they are creative differs...

BUILD EXPLOIT

PIONEER EXPLORE

COMMUNICATING CREATIVITY

Continuum of Change

An important point...

It is the style of change that is important to Builders and Pioneers. Builders are most comfortable with adaptive or incremental changes. Pioneers are most comfortable with innovative or disruptive changes.

In fact, Kirton points out that “agents of change can be either adaptors or innovators, and this is solely determined by the group composition, so that if it is an innovator group, the agents of change will be those more adaptive, and vice versa.” (http://www.bitcoven.com/initiatives.html)

Characteristics of the ends of the continuum

Adaptive Repetitive Known Algorithm Efficient Analytical Breakthrough First Time Unknown Mystery Inefficient Intuitive Continuous Improvement Six Sigma Lean Project Management Disruptive Innovation Breakthrough Thinking
Moving breakthrough projects, faster...

Innovation projects compared to standard projects

- Innovation projects
  - loosely defined, ambiguous objectives
  - more experimental, exploratory seldom follow strict linear guidelines.
- Teams
  - more diverse
  - higher level of trust
  - explore new territory where failure is a possibility.
- Fail fast. Fail smart. Move on.

Creativity and Innovation Management Example

Key Ideas

- Developing innovation and design thinking skills in all staff leads to innovative solutions for customers
- Learning by “doing first” drives cultural change
- Creative Problem Solving (CPS), Design Thinking and Coaching make us more innovative

Changing the culture

- We are “ootching” or shifting in small increments as we implement change Smith (1997)
- Using both the intuitive and analytical abilities of our team
- Developing creative and design skills in all employees will improve our ability to innovate
- Innovation can be improved by focusing efforts on Process, Person, Product and Environment Rhodes (1991)
What Results have we had so far?

- Management team has identified several ideas to explore for possible new business initiatives.
- Sales and Operations teams have identified problems they wish to address. Facilitation of implementation plans is next.
- Website team is using CPS to move their project forward.
- Agent design project is in progress with completion scheduled for late August.
Appendix C – Web Links

Website Home Page
www.stevejhammond.com

Personal Bio
http://www.stevejhammond.com/about-me-2/

Aerospace Technology Center Promo Prototype #1 – (password: GATC)
http://vimeo.com/62660216

Aerospace Technology Center Promo Prototype #2 – (password: GATC)
https://vimeo.com/63354825

Apple One-to-One
http://www.apple.com/retail/learn/one-to-one/

Rolf Smith’s Seven Levels of Change
http://www.youtube.com/watch?v=CzJIdmu0I

MBTI® How Judgers and Perceivers Approach Goals
http://www.youtube.com/watch?v=KL11OmS1aIU
Appendix D – Video Script
Aerospace Learning Center Script

The Aerospace Learning Center is an exciting opportunity to develop a learning, entertainment, and economic resource in Gurnee, Illinois.

What if we could excite students about learning? What if we showcased the past, present and future of aerospace technology?

And what if we could provide Northeastern Illinois with an educational, entertainment, and economic resource that served over 900,000 residents and many more visitors?

The aerospace learning Center will do this and more. The Center’s museum will preserve Illinois’ history of leadership in aviation and science. It will include a Challenger Learning Center. The Center is a NASA initiative inspired by the crew of the Space Shuttle Challenger and their educational mission. Over 200 of these centers provide an inspiring educational experience for middle school and high school students.

The Aerospace Learning Center will include the museum, Challenger Learning Center and commercial ventures including flight simulators and other aerospace and technology oriented businesses.

The Center has 2 primary missions. In its history mission, it will tell the stories of Illinois’ aerospace pioneers. The region has had a major role in commercial and military aviation and aerospace technology.

The Center’s second mission is to educate and inspire youth and adults alike.

It will be much more than an aviation Museum. With hands-on exhibits and displays, artifacts of aviation history, simulators, educational programs and working space missions, the Center will provide an interactive experience that is fun for all.

The Center concept began with passionate aviation and education advocates. Together with local government and commercial support, they see the benefits the Center can provide.
The proposed site is located near the Gurnee Mills Mall, near major roadways and entertainment venues such as Six Flags. The learning center is planned as part of the 30-acre development project, just North and East of the mall.

This diagram shows a development concept. The learning center would cover roughly 6 acres. The rest of the development will include upscale lodging, retail space, restaurants, and other operations.

Here’s a working concept for the facility. Exhibit space will vary based on the acquisition of aircraft and other attractions.

The Center will support education in Science, Technology, Engineering, The Arts and Math. It will enhance Gurnee’s reputation as a recreational destination and add revenue for businesses and government.

There is work to do. We need to identify and acquire assets that can excite the facility’s visitors. Economic models need to be developed to ensure that the facility is viable in the long run. We need to work with educators to learn how to make the experience really meaningful for students. And perhaps most importantly, we need to continue to find supporters who are passionate about education, aerospace, and technology.

This is an exciting adventure. It brings together communities that are passionate about aerospace, education, youth and economic development in a way that can significantly benefit the community. Your help and support can make this happen.

Thanks so much for your time and for your support. It's going to be a great ride.