

A MODEL FOR COACHING YOUTH
TO STRENGTHEN PERSONAL CREATIVITY

by

Linda L. Hopper

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The Dissertation of Linda L. Hopper
is approved and is acceptable in quality and form:

Chancellor

Academic Dean

International University of Professional Studies

Maui, 2014

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
ABSTRACT	ix
CHAPTER	
1 PROBLEM FORMULATION.....	1
Introduction.....	1
Problem Formulation.....	2
Limitations.....	3
2 LITERATURE REVIEW.....	6
What Is Creativity?	6
The Creative Process.....	13
Personality Traits of Creative Adults and Youth.....	18
Development Stages and Factors.....	20
Affective.....	20
Cognitive.....	22
Talent Development.....	27
Predictors of Adult Creativity.....	30
Factors in Creative Development.....	32
Motivation.....	33
Creativity Slump.....	37
Environment.....	39
Assessing Creativity.....	42
Coaching.....	46
Introduction.....	46

	Youth Coaching Models and Research.....	52
	Coaching Within an Organization.....	56
3	THREE-TIERED MODEL: COACHING YOUTH TO STRENGTHEN PERSONAL CREATIVITY.....	58
	Introduction.....	58
	Model for Coaching Youth to Strengthen Personal Creativity.....	60
	Self-Awareness.....	61
	Knowledge.....	65
	Barriers to creativity.....	66
	Everyday creativity.....	71
	Strategies for Coaching Personal Creativity.....	72
	Goal-Setting and Goal Attainment.....	82
4	METHODOLOGY.....	87
5	RESULTS, SUMMARY, AND RECOMMENDATIONS.....	88
	Recommendations.....	89
	REFERENCES	90
	APPENDIX.....	111
	BIOGRAPHICAL SKETCH.....	113

LIST OF TABLES

Table	Page
2.1 H. Gardner's Multiple Intelligences.....	24
2.2 Webster's Dictionary Table of Definitions.....	47
2.3 ICF Table of Definitions.....	48
3.1. Adolescent Development.....	59

LIST OF FIGURES

Figure	Page
2.1 Amabile's Componential Theory of Creativity of Creativity.....	34
3.1. Coaching Youth to Strengthen Personal Creativity.....	60

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By

Linda L. Hopper

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Recent studies show that creativity has been declining in school-age children resulting in what many experts are calling the “creativity crisis.” Prior to Joy Paul Guilford’s inaugural address (1950) to the American Psychological Association, the topic of creativity was not considered an area of interest for researchers. In the past several decades, researchers have explored the complexity of creative behavior with a greater understanding of how creativity impacts both individuals and organizations. Creativity is rapidly becoming a subject of high interest to business leaders, politicians, and educators who recognize that creative thinking is imperative in solving many of the global issues facing the world today. Yet at the same time a premium on creativity is called for, many educational systems actually discourage creativity.

The focus of this work is on the creativity gap left in education by its focus on high-stakes standardized testing and how coaching youth (ages 12 to 20) in strengthening their personal creativity can help narrow that gap. I propose that this is a legitimate, but largely neglected, endeavor in professional life coaching.

Coaching itself is a fledgling cross-disciplinary occupation with very few coaches focused primarily on working with youth and amongst youth coaches; almost none are coaching with a focus on strengthening personal creativity. This statement was verified by my extensive review of the literature on both creativity and youth coaching as well as a Request for Proposal (RFP) to members of the International Coach Federation seeking interviews with coaches specifically working with youth or coaching for personal creativity. Out of 12 responses, only 1 individual, a youth coach working with ADHD clients, did any coaching on creativity. The aim of this dissertation is to provide a review of the literature on creativity and youth coaching and to offer an untested model for coaching youth in strengthening their personal creativity. The proposed model, Coaching Youth to Strengthen Personal Creativity, has three tiers, *Self-Awareness, Knowledge, and Strategies for Coaching Personal Creativity*. The purpose of this dissertation and in offering this model is to provide the groundwork for coaches interested in expanding their coaching practices to coaching youth for personal creativity, thereby allowing more opportunities for further research.

Keywords: life coaching, youth coaching, adolescent coaching, teen coaching, coaching for creativity, creativity, personal creativity

CHAPTER 1

PROBLEM FORMULATION

Introduction

At a time when many business leaders, educators, psychologists, and social scientists are calling for more creativity and innovation to maintain economic prosperity in the United States, research shows creativity (as measured by the Torrance Tests of Creative Thinking) is declining in school-age children (Kim, 2011). Kyung Hee Kim, in her article, “The Creativity Crisis” raised considerable concern for the ability of the United States to maintain economic prosperity when competing globally. She expressed concern for the widening gap between the growing need for more creativity and innovation with the current emphasis on high-stakes testing which has resulted in declining creativity (Kim, 2011). Two leading researchers of creativity in organizations, Teresa Amabile and Beth Hennessey, contend that it is only “with creativity that we can hope to address the myriad problems facing our schools and medical facilities, our cities and towns, our economy, our nation, and the world. Creativity is one of the key factors that drive civilization forward” (Hennessey & Amabile, 2010, p. 569).

I propose that utilizing a three-tiered model for coaching youth in personal creativity can fill this gap. The three tiers are *Self-Awareness*, *Knowledge*, and *Strategies for Coaching Personal Creativity*.

This work will provide answers to the following questions:

- What factors influence the development of creativity in youth?
- What are the barriers to developing personal creativity?
- What are the internal processes of creativity, and can they be coached or taught to youth?
- What are the differences between coaching, consulting, counseling, mentoring, tutoring, and teaching?
- What coaching skills are most beneficial in coaching youth (ages 12 to 20) for personal creativity?

Problem Formulation

One of the major criticisms of high stakes testing is that it forces schools to offer a narrow curriculum, in essence, to teach to the test. Students living in poverty or with lower test scores are given fewer opportunities for a well-rounded education. Arts, science, history, and other subject areas are eliminated in order to focus more on reading and math. However, high-stakes testing has failed to improve test scores or to close the achievement gap (Kim, 2011).

There is growing concern that the foundation of innovation and entrepreneurship upon which the U.S. economy is based is at risk. Yong Zhao (2012) contends that entrepreneurship and innovation are what is needed to solve the problems of a global economy. This requires creativity. He explains that entrepreneurship is equivalent to problem solving creatively. Zhao further suggests that countries that perform well on standardized tests show a low level of entrepreneurship and creativity. He states that the current emphasis on high stakes testing in the U.S. education system is a step backward

from the creative problem solving and innovation needed for the twenty-first century (Zhao, 2012).

The purpose of this work is to offer a fresh perspective on coaching youth ages 12 to 20 to strengthen their personal creativity. Educators, social workers, therapists, and any discipline working with youth, can shift from *imparting* knowledge to *coaching* students to *seek* knowledge that is interesting and engaging. Educators and coaches can assist students and teachers in developing a growth mindset . . . the hallmark of creativity. I propose that the largest association of coaches, the International Coach Federation (ICF), has a definition of coaching that aligns well with the mission of many professionals working with youth. The ICF states that coaching is “a thought-provoking and creative process that inspires” the recipient to maximize his/her potential (ICF, 2013a).

Developing creativity is associated with productivity, adaptability, and well-being and is beneficial for both individuals and societies (Runco, 2004). Coaching for personal creativity fills a gap between the constraints of the education system and the perceived need for future creativity and innovation in the workforce. In this dissertation I propose a three-tiered model (*self-awareness, knowledge, and strategies*) for coaching youth in personal creativity.

Limitations

Within the four areas of creativity—process, personality (characteristics), products, and press (environment), there are many varying definitions and perspectives of creativity making it difficult to define. Without a common definition, creativity is difficult to measure and assess. Currently the accepted method of measurement is The

Torrence Tests of Creative Thinking (TTCT) which measure divergent thinking. Some researchers feel the tests are too limited, measuring only one aspect of creativity (Barron & Harrington, 1981; Furnham, Crump, Batey, & Chamorro-Premuzic, 2009; Johnson & Fishkin, 1999; Lubart & Guignard, 2004; Plucker & Makel, 2010; Runco & Acar, 2012; Wakefield, 1992).

Hennessey and Amabile (2010) attempted to synthesize the knowledge on creativity. They found that scholarly research on creativity has proliferated in the past decades. Their focus was to encompass most of the subspecialities in the study of creativity using a two-part process. They first polled active researchers and theorists of creativity they believe have made the most significant contributions to the field and secondly, performed a review of the literature. They asked their colleagues to make suggestions on articles, books, and so on and were surprised to find that there was very little overlap in suggestions:

What did this diversity of opinion, this lack of consensus, say about the state of the field? As we compiled this review, we were consistently struck by what can only be termed a growing fragmentation of the field. For the first three decades of modern psychological research into creativity (starting circa 1950), there were a small number of ‘big questions’ that most researchers focused on: creative personality and creative thinking techniques. Then, for many years, there was an additional focus on the social psychology of creativity. Since the 1990s, we have seen a virtual explosion of topics, perspectives, and methodologies in the creativity literature. Yet there seem to be few, if any, “big” questions being pursued by a critical mass of creativity researchers. . . . It is our firm impression

that investigators in one subfield often seem entirely unaware of advances in another. (Hennessey & Amabile, 2010, p. 571)

The fragmentation referred to by Hennessey and Amabile exacerbates the complexity and confusion surrounding creativity research.

Coaching, a relatively new field of research, also lacks a common definition. As the field has grown, the definition of a coach has become fuzzier. Many people in organizations of commerce and education call themselves coaches, so the delineations between coach, mentor, and tutor are blurred. In addition, the number of coaches working exclusively with youth is small and the number of studies demonstrating the effectiveness of youth coaching programs is limited.

CHAPTER 2

LITERATURE REVIEW

In reviewing the literature for this work I discuss the definition of creativity, the characteristics of creative people, theories of the creative process, the development stages of creativity, and assessing creativity. In addition, I review the research and effective coaching practices for youth. Finally, I offer strategies for coaching youth in personal creativity through a three-tiered model.

What Is Creativity?

Creativity is defined in many ways. Silvano Areiti defined the creative human as someone who takes what is available and turns it into something unusual (Areiti, 1976). Sternberg and Kaufman offered a simple definition of creative response as “novel, good, and relevant” (Kaufman & Sternberg, 2010, p. xiii). Ken Robinson states creativity is the “process of developing original ideas that have value” (Robinson, 2011, p. 49). Most creativity theorists agree that creativity is the ability to produce work that is original, high in quality, and useful (Fishkin, 1999; Richards, 2010b; Runco, 1996; Starko, 2010; Torrance, 1970).

The definition becomes blurred in discussions on specific products, processes, or in the *development* of creativity. Some theorists define it as a syndrome or complex system that has creativity manifesting through the synthesis of many different skills, attitudes, traits, and abilities (Plucker & Makel, 2010). Howard Gardner’s theory of eight

different intelligences suggests that creativity is demonstrated through the development of these intelligences (Gardner, 1993).

Nevertheless, most theorists agree that a product demonstrating creativity must be original and useful (Lubart, 2010). However, the meaning of *original* can take on different meanings in different cultures and at differing times. What is considered creative in one culture may not be in another. A product considered creative a decade ago, may not be considered creative by today's standards.

Mel Rhodes (1961) developed focus areas of creativity and what is commonly known as the four P's of creativity: Process, Product, Person (Personality), and Press (Place or Environment). Despite the fact that there is considerable research done in each of these areas, there remains no common standard regarding what or who is creative and what or who is not. Therefore, it is extremely difficult to determine processes and products as creative (Kaufman, Kornilov, Bristol, Tan, & Grigorenko, 2010).

Researchers disagree whether creativity is domain specific or domain general (Kaufman & Baer, 2004). Domain-specificity theory states that creativity exists only in one field and is non-transferable to other domains (Baer, 2010; Kaufman & Baer, 2004). Domain generalists argue that creative people have certain motivation and personality traits that allow them to be creative across several domains (Kaufman & Baer, 2004).

In basic terms, the domain general theorist argues that if someone is highly creative in one domain, than there would be a positive correlation of products rated as creative across differing domains (Baer, 2010). For example, a poet considered highly creative by her peers may also be an acclaimed painter, utilizing the same creative aptitudes or traits to allow success in two or more domains. Creative traits most often

associated with domain general theory are “divergent thinking ability, task motivation, openness to experience, and tolerance of ambiguity” (Kaufman & Baer, 2004, p. 12).

Domain generalist proponents often cite Gregory Feist’s (1998) review of empirical research on the creative personality. Feist concludes that there is “a rather convincing case that creative people behave consistently over time and situation and in ways that distinguish them from others” (Feist, 1998, p. 304). He goes on to explain that the creative personality has dispositions to creative achievement. Domain generalists believe the common characteristics of creative people allow creative people to create across domains. Baer (2010) cautions that Feist did not argue for causation. In other words, it is not known whether the common characteristics and traits lead to creative behavior in other domains, or, conversely, if creativity in differing domains leads to some similar characteristics.

However, Feist argues that creative talent is domain specific and that limits an individual to making contributions to only one or two domains during a lifetime. He defines seven categories of domains of creative talent: physical sciences, biological sciences, social sciences, literature, the visual arts, music, and math (Feist, 2004).

Two top researchers in the domain-general domain-specific debate published counter-point articles in 1998. Baer argued for domain specificity citing a study of eighth grade students in which he asked them to each come up with four creative products (two primarily verbal, one primarily mathematical, and one that involved both words and numbers). He concluded that the correlation between creative products of an individual was very low (Baer, 1998). He also referenced two training studies demonstrating “that

training in task-specific creativity-relevant skills increases creative performance only on tasks directly related to the training” (Baer, 1998, p. 174).

Jonathan Plucker took the opposing view, arguing for domain general creativity. He argues that domain-specific theory is based on selective interpretations, research with methodological limitations, and faulty logic (Plucker, 1998). He points out that research of performance-based assessments almost always concludes that creativity is predominantly task or domain specific. On the other hand, psychometric methods of testing suggest creativity is predominantly domain general. He goes on to make the case that the most widely used and accepted test for determining creativity, the Torrance Tests of Creative Thinking (TTCT), measuring fluency, flexibility, originality, and elaboration, do so without addressing specific content areas (Plucker, 1998).

Many researchers recognize that domain-specific theorists and domain-general theorists look at differing criteria (traits vs. accomplishments) and as such, believe both personality traits (general) and passion or drive in a particular field of endeavor over a decade or longer (specific) are both relevant for creativity (Amabile, 2012; Csikszentmihalyi, 1996; Lubbart & Guignard, 2004; Plucker & Beghetto, 2004).

Teresa Amabile, a professor at Harvard Business School, developed the Componential Theory of Creativity. She suggests that creativity is a mixture of various components: domain-relevant skills, creativity-relevant processes (cognitive and personality characteristics), task motivation, and the social environment (Amabile, 2012). Her model suggests that creativity is both domain specific and domain general. A more detailed explanation of her model can be found in a later section of this chapter, The Creative Process.

Todd Lubbart and Jacques-Henri Guignard (2004) propose that both components of domain specific or domain general play important roles at different stages of a creative person's development. They argue that it changes the question from determining if creativity is domain specific to *when* it becomes specific and how the components interplay throughout one's life.

Jonathan Plucker and Ronald Beghetto (2004) suggest that creativity is domain general but only looks domain specific when creative people apply their creativity to areas of interest. They maintain that many of the cognitive processes of creativity extend beyond one domain, but that criteria measuring creative products are domain specific.

Arguments for domain specific or domain general continue in the discussions of *who* should be considered creative. Over the past several decades, much of the research on creativity has been focused on the specific character traits of highly creative people in an effort to determine who is creative and how they are creative.

Sternberg argues that high levels of creativity are domain specific with the creative person achieving eminence in her field after 10 or more years of study or practice (Kaufman & Baer, 2004). *Eminence*, however, is socially defined. In other words, people within the domain have to recognize the contributions of the creative person (Goertzel, 2009).

Dean Keith Simonton (2010) asserts that creative geniuses become eminent when they produce a masterwork within an established domain. Examples of domains are ballet or mathematics. Creative geniuses, according to Simonton, make lasting contributions to one or more domains, the effects of which can span generations. Such

domains are often referred to as Big-C creativity, with everyday creativity referred to as little-c creativity.

In order to be considered Big-C creative, the creative contribution of the creator must achieve eminence status (Kaufman & Beghetto, 2009). Simonton (2010) found that creative geniuses of the highest order tend to be highly productive. In his review of the research, Simonton found that a small elite is credited with the most output of creative works. Often creative geniuses have masterful products in numerous domains. Examples of creative geniuses are Leonardo da Vinci, Benjamin Franklin, and Johann Wolfgang von Goethe (Simonton, 2010).

Many researchers believe little-c or everyday creativity is useful in creating more meaningful life experiences, in contributing to well-being and personal growth, and is sometimes even necessary for survival (Beghetto, 1999; Ivcevic, 2007; Richards, 2010b; Runco, 2004; Sarnoff & Cole, 1983).

Mark Runco suggests everyday creativity is personal rather than social. An individual can use his or her creative capacities in dealing with minor issues encountered in day-to-day living. An idea or an approach to problem solving that is original and effective is considered creative by personal standards rather than by expert standards (Runco, 1999).

According to Ronald Beghetto, “The focus of everyday creativity is not so much on producing creative outcomes, but rather approaching everyday activities with a creative, open, and flexible mind-set” (Beghetto, 1999, p. 337).

Ruth Richards suggests that everyday creativity is as much about creative process as creative product. In other words, it is just as important *how* one does a task as to *what*

is produced. Her contention is that everyday creativity is universal to us all and allows us to use our talents and skills in unique ways to solve everyday problems and challenges (Richards, 2010b).

One of the earliest researchers of creativity, E. Paul Torrance, suggests that the need to be different, to be oneself, is a basic creative need in all of us and that in fact, to be creative one *has* to be different to realize individual potential (Torrance, 1970).

Kaufman and Beghetto (2009) propose a Four C model of creativity that expands on the Big-C, little-c model, filling in the gaps left by these two polar extremes of creativity. They contend that under little-c creativity is “mini-c” creativity. Mini-c creativity is defined as transformative learning, the “personally meaningful interpretations of experiences, actions, and events” (Kaufman & Beghetto, 2009, p. 3). Runco’s definition of personal creativity, transforming the objective world into original interpretations, would fall into this category (Runco, 1996, 2004). Mini-c creativity preserves creative potential by recognizing that intrapersonal insights and interpretations may be creative even when experienced only by the individual (Kaufman & Beghetto, 2009).

Kaufman & Beghetto (2009) also argue that mini-c is important with respect to recognizing creativity in children. In contrast with focusing on creative production, mini-c recognizes the undeveloped creative potential in young people by acknowledging their unique insights and interpretations (Kaufman & Beghetto, 2009).

Under Big-C creativity, Kaufman & Beghetto (2009) propose Pro-c status. Pro-c recognizes the developmental progression of professionals beyond little-c who have yet to attain Big-C or eminent status. Pro-c creators generally have reached a professional

status in their domain. An example would be a writer who has published various works but has not produced what would be considered a masterwork or a scientist who has made small contributions to his or her field without making a ground-breaking discovery (Kaufman & Beghetto, 2009).

Kaufman and Beghetto (2009) present the Four C model as a way to view creativity across a broad range of creative abilities taking into consideration the creative potential of children and the professional-level products of expert creators not accounted for in the Big-C, little-c model. They argue that it presents a framework that allows the consideration of creative ability, interest, and pursuits in specific dimensions and encourages more research in these areas (Kaufman & Beghetto, 2009).

The Creative Process

There are as many theories of the creative process as there are definitions for creativity. Joy Paul Guilford developed the Structure of Intellect (SOI) model to help direct researchers in their studies of creativity. His model grouped various abilities under three dimensions: content, product, and process (Runco, 2010).

In 1926 Graham Wallas was the first to describe the creative process. His description involves four steps: preparation, incubation, illumination, and verification (Starko, 2010). In the preparation phase, the creator is gathering information, finding a problem, brainstorming ideas, and thinking about the project. During the incubation phase, the creator is not thinking about the problem or project at a conscious level, but is engaged in unrelated activities. The incubation phase is followed by the illumination phase which results in an “aha! moment.” That moment is when the pieces of the puzzle—the solution, the insight, or the idea—seem to pop out of nowhere into

consciousness (Csikszentmihalyi, 1996). This phase, and whether it exists or not, is the phase most debated by researchers. The final verification phase is when the creator begins to evaluate, test, or refine the project (Lubart, 2000).

Arieti calls the creative process a magic synthesis of the subconscious with the conscious yielding something new and unexpected (Arieti, 1976).

Guilford's model forms a basic understanding of the creative process; however, more complex models have expanded and built upon it. Teresa Amabile first developed the componential theory of creativity in 1983, continuing to elaborate on the model in later works (Amabile, 2012). One of the basic assumptions underlying the theory is that creativity is a function of the components operating at any given time, within and around the creative person. There are four components in the model: domain-relevant skills, creativity-relevant processes, task motivation, and the social environment.

Domain-relevant skills refer to the knowledge, expertise, technical skills, and talent developed within a particular domain. Creativity-relevant processes refer to the personality traits and cognitive style of the creator. Amabile has identified the following traits and processes conducive to creative productivity: independence; risk-taking; self-discipline; tolerance for ambiguity; idea generation; and ability to view problems from different perspectives (Amabile, 2012).

Amabile is widely known for her work on intrinsic motivation in the workplace. Intrinsic task motivation, the third component, is reflected in the passion a person has to undertake the creative endeavor. The motivation is intrinsic stemming from enjoyment, involvement, interest, and challenge (Amabile, 2012).

The social environment is the fourth component to Amabile's model. There are numerous studies showing that extrinsic rewards for task completion often undermine intrinsic motivation (Hennessey, 2010b). Therefore, environments that support intrinsic motivation do so through presenting positive challenges, encouraging new ideas, and stimulating creativity and collaboration. Social environments focused on extrinsic rewards, maintaining status quo, critical of new ideas, and having low-risk attitudes, impede creativity (Amabile, 2012). After much research, the Intrinsic Motivation Principle of Creativity has become undisputed. In other words, it is now accepted that intrinsic motivation is conducive to creativity while extrinsic motivation actually hinders it (Hennessey, 2010a).

Mihaly Csikszentmihalyi's (1996) system view of creativity also emphasizes the importance of environment in creativity. The individual must be in an environment conducive to acquiring the skills in the domain. Such environments are vital, generating more excitement and ideas, and are more conducive to creative output than more repressive environments (Csikszentmihalyi, 1996).

Jane Piirto (2010) formulated The Piirto Pyramid of Talent Development as a way to describe the creative process. Piirto has divided the creative process into themes and subthemes. She found that creative processes could be divided into three general themes; creative people have certain core attitudes toward creativity (openness, risk-taking, self-discipline, tolerance for ambiguity, and group trust) they experience the seven I's of creativity (inspiration, insight, incubation, imagination, imagery, intuition, and improvisation), and they engage in common practices such as creativity rituals, solitude, meditation, the need for community, and establishing culture and creativity as a way of

life (Piiro, 2010). Piiro maintains that creators begin with “what is absolutely necessary and nonnegotiable to creative production—they have a desire, a motivation, a passion to do the work in the domain they have chosen” (Piiro, 2010, p.144).

One of the processes most important in the development of creativity and which is relevant to coaching youth is the concept of play. Play is important because it allows children to act out new ideas in a less risky environment (Cropley, 2001). Pretend play uses many of the cognitive and affective processes useful in creativity. Through imagination, children develop the ability to create new situations and new behaviors. They are able to practice divergent thinking, a key indicator of creativity (Richards, 1996). Play is also seen as a way to reduce stress that can affect creative performance (Moon, 2012).

Sandra Russ and Jessica Dillon (2011) investigated changes in pretend play ability of children from 1985 to 2008. Their study was to see if there was a correlation between the recent evidence of a decrease of divergent thinking in school-age children (Kim, 2011) and a decrease in children’s imaginative playing time. Their findings showed that in spite of a decrease in playing time, imagination, and comfort with play increased over time. Their findings lead to further areas of research on the relationship between creativity and play (Russ & Dillon, 2011).

Robert Sternberg and Todd Lubart developed the *investment theory of creativity* as a way to understand creativity better. Using a metaphor for investing, their theory states that creative people are those willing to “buy low and sell high” in ideas (Sternberg, 2006).

Buying low means pursuing ideas that are unknown or out of favor but that have growth potential. Often, when these ideas are first presented, they encounter resistance. The creative individual persists in the face of this resistance and eventually sells high, moving on to the next new or unpopular idea. (Sternberg, 2006, p. 87–88)

The investment theory requires six interrelated resources: intellectual abilities, knowledge, styles of thinking, personality, motivation, and environment. Sternberg and Lubart's premise is that creativity is a decision anyone can make, but most find the costs too high (Sternberg, 2006).

Mihalyi Csikszentmihalyi suggests a systems theory of creativity. He believes: Creativity results from the interaction of a system composed of three elements: a culture that contains symbolic rules, a person who brings novelty into the symbolic domain, and a field of experts who recognize and validate the innovation. All three are necessary for a creative idea, product, or discovery to take place. (Csikszentmihalyi, 1996, p. 13)

Csikszentmihalyi suggests as much attention must be paid to the domain and to the field as to the creative person. He argues that to understand creativity, creative people are only one link in the chain and should not be studied exclusively. Without understanding the prior knowledge and the environment that stimulated the thinking of creative persons, along with the culture that recognized their contributions, he posits we cannot fully understand the creative process (Csikszentmihalyi, 1996).

Personality Traits of Creative Adults and Youth

There are numerous differing conclusions in the research regarding creative personality traits or characteristics (Conrad, 2009). Csikszentmihalyi describes the highly creative person as being complex with a multitude of differing traits (Csikszentmihalyi, 1996). According to Csikszentmihalyi, the difference between a highly creative person and a person who is not highly creative is the creative person's ability to integrate antithetical traits with seemingly more ease. He defines creative individuals as complex, having the ability to express a wide range of opposing traits. For example, a creative person can demonstrate periods of intense physical energy, but can also be contemplative and quiet (Csikszentmihalyi, 1996).

Frank Barron and David Harrington (1981) reviewed the research on personality traits of individuals in art, music, literature, and science and technology. They sought core characteristics associated with creative achievement and activity. They found that in general, creative people exhibited:

High valuation of esthetic qualities in experience, broad interests, attraction to complexity, high energy, independence of judgment, autonomy, intuition, self-confidence, ability to resolve antinomies or to accommodate apparently opposite or conflicting traits in one's self-concept, and, finally, a firm sense of self as "creative."(p. 15)

Zorona Ivcevic (2007) compared the similarities and differences of personality traits of artistic and everyday creative people. She found artistically creative individuals were more imaginative and socially unconventional than the general population. They were also more sensitive and more prone to psychopathology. Everyday creative

individuals were more imaginative than the general population and were associated with well being and personal growth. Both the artistic and everyday creative individual was open to new experiences (Ivcevic, 2007).

Research on personality traits and characteristics of creative people has waned due to satiation (Fishkin, 1999). In other words, researchers have moved on to areas of creativity less studied. A summary of the research indicates that highly creative people possess high intelligence, originality, imagination, and verbal fluency. They have strengths in risk-taking, tenacity, curiosity, drive, ability to concentrate, high intrinsic motivation, self-regulation and self-evaluation, intuition, and rejection of outside limits. These personality characteristics repeatedly appear in the literature and are most often defined by psychometric tests (Fishkin, 1999).

Harrison Gough (1979) developed a self-administered Adjective Checklist designed to identify the dominant characteristics of creative people. He found that a common adjective creative individuals used to describe themselves was self-confident (Gough, 1979). High levels of self-confidence are important to the creative process because they assist the individual to persist whenever confronted with failure or criticism (Russ, 1993).

An area of interest to many researchers is the study of creative artists versus creative scientists. Robert and Michele Root-Bernstein (2004) began researching the connection between scientists and the arts when they noticed that many eminent scientists had artistic backgrounds or interests. As a result of their research they found five correlates between artistic and scientific creativity: First, artists and scientists both had very broad interests and training in other domains; second, they both have similar

psychological profiles; third, artistic proclivities foretell scientific success; fourth, scientists and artists think about and process their creative work in the same way; and finally, artists and scientists have made contributions to each other's domain. They concluded that there were more similarities than differences between creative artists and creative scientists (Root-Bernstein, R. & Root-Bernstein, M., 2004).

Gregory Feist (1998) conducted a meta-analysis of the literature on the personalities of scientific and artistic creativity. He compared three sets: scientists versus nonscientists, more creative versus less creative scientists, and artists versus non-artists. He found that "creative people are more autonomous, introverted, open to new experiences, norm-doubting, self-confident, self-accepting, driven, ambitious, dominant, hostile, and impulsive" (Feist, 1998, p. 299). Feist found that artists differed from scientists in that their dispositions were more emotionally unstable, cold, and rejecting of group norms (Feist, 1998).

Development Stages and Factors in Development

Affective

Sandra Russ (1993) proposes five areas of affect important to the creative process. The first is *access to affect-laden thoughts*. Examples of this ability are fantasy in daydreams and play. The second is *openness to affect states*, or the ability to experience and tolerate anxiety or to experience passion in a task. *Affective pleasure in challenge* and *affective pleasure in problem solving* are two other areas important to creativity. The ability to take cognitive control of the affective process or to use affect adaptively in the creative process is the final area of importance.

Alice Isen, Kimberly Daubman, and Gary Nowicki (1987) studied positive affect and found it resulted in more divergent associations to neutral words and in more creative problem solving. Both conditions were attributed to creativity.

Carol S. Dweck (2012) studied the beliefs that children have about their own intelligence. Students can have the theory about their intelligence that it is a fixed trait; that they cannot change the amount of intelligence they have (Dweck, 1999). Or they can believe intelligence can be developed. She calls the former a fixed mindset and the latter a growth mindset. She found in her research that students with a fixed mindset prefer tasks within their comfort zone where there is little risk of them looking “bad.” Students with a growth mindset prefer tasks that challenge them. Dweck found that the practice of praising a young person’s intelligence or strength contributed to the individual developing a fixed mindset. She endorses praising effort rather than praising ability (Dweck, 2012).

Zorana Ivcevic, Marc Brackett, and John Mayer (2007) examined emotional intelligence (EI) and emotional creativity (EC) as two distinct sets of abilities and how they factor into creative behavior. The mental process EI includes four components of emotion; the ability to perceive, use, understand, and regulate emotions. It requires analytical thinking. EC is the ability to feel and express novel blends of emotions in positive ways. “Whereas EI pertains to how a person reasons with emotions, EC pertains to the richness of a person’s emotional life” (Ivcevic et al, 2007, p. 200).

Ivcevic et al. (2007) hypothesized that the relationship between EI and EC would parallel that of cognitive intelligence and creativity. There is a low correlation between intelligence and creativity, with tests of creative ability more successful in predicting

creative accomplishment. Creativity and intelligence are theorized to be largely disjointed and independent abilities. Ivcevic and her colleagues used three studies to examine the relationship between EI and EC and their predictive validity of creative behavior. All three studies supported the hypothesis demonstrating that EI and EC are distinct abilities. EI relies on convergent thinking, analyzing emotions to better cope with negative emotions and to promote positive emotions. EC in contrast, requires divergent thinking, generating appropriate but original emotional responses. Ivcevic et al. (2007) argue that both have their place in the creative process.

Cognitive

A number of researchers focus their studies on creative cognition, an approach that has its roots in cognitive psychology and cognitive science. The creative cognition approach seeks to understand how cognitive processes, available to everyone, are utilized to yield novel ideas and products (Ward & Kolomyts, 2010).

Martin Bink and Richard Marsh (2000) suggest that there are basic cognitive processes that are universal to everyone which also form the basis for the creative process. Those processes include generating and synthesizing relevant information and then selecting from that information. They argue that while the underlying processes are the same for highly creative people as for other people, the differences may be in working memory capacity, speed of retrieval, recollection ability, activation and inhibition of relevant and irrelevant concepts, amongst other processes (Bink & Marsh, 2000, p. 75).

Edward de Bono (1970) describes the thinking processes associated with creativity as lateral thinking. He makes the distinction between vertical thinking, a selective way of thinking, and lateral thinking, a generative way of thinking. “Vertical

thinking moves only if there is a direction in which to move, lateral thinking moves in order to generate a direction” (de Bono, 1970, p. 39). De Bono further distinguishes vertical thinking as developing patterns and lateral thinking as changing patterns by constructing things in a different way. Some of the techniques he suggests for practicing lateral thinking are: brainstorming, challenging assumptions, suspending judgment, analogies, and the reversal method. Vertical and lateral thinking appear to be similar to the concepts of convergent and divergent thinking respectively.

The relationship between intelligence (as measured by Intelligence Quotient or IQ) and creativity is a topic of discussion among creativity researchers (Barron & Harrington, 1981; Johnson & Fishkin, 1999; Kim, Cramond, & VanTassel-Baska, 2010; Starko, 2010; Wakefield, 1992). Joy Paul Guilford’s Structure of Intellect (SI) model posits creativity as a part of intelligence (Guilford, 1967). Other studies show a low correlation between intelligence and creativity (Barron & Harrington, 1981; Johnson & Fishkin, 1999). Beyond an IQ of 120, researchers have found there is no correlation between intelligence and creativity. In other words, a modicum of intelligence is necessary to be creative, but beyond that, it ceases to be a factor (Johnson & Fishkin, 1999; Kim et al., 2010; Plucker, 1999).

Kyung Hee Kim conducted a meta-analysis of studies linking intelligence and creativity and found that IQ scores were not associated with creativity and in fact, there was little support for a Threshold Hypothesis (Kim, 2008).

Howard Gardner (1993, 2006) pioneered the notion that people have different cognitive strengths and contrasting cognitive styles. He posits that there is more than one kind of intelligence and developed the theory of multiple intelligences. Gardner objects

to intelligence being defined by a single psychometric test (IQ test). His theory of multiple intelligences includes musical intelligence, bodily-kinesthetic intelligence, logical-mathematical intelligence, linguistic intelligence, spatial intelligence, interpersonal intelligence, intrapersonal intelligence, and more recently added; naturalist intelligence and spiritual or existential intelligence. Gardner believes individuals possess a full range of these intelligences and display them in varying combinations. The table below describes Gardner’s Multiple Intelligences (Gardner, 2006):

Table 2.1 H. Gardner’s Multiple Intelligences

Intelligence	Description
Musical	Music skills include reading and interpreting symbols. Musical ability can be attributed to certain parts of the brain and therefore qualify it as an “intelligence.”
Bodily-Kinesthetic	The ability to use one’s body to express emotions, play a sport, or to create requires unique cognitive processes.
Logical-Mathematical	For the prodigy, the process of problem solving is rapid. This intelligence is also nonverbal and requires the analyzing, synthesizing, and evaluating of information. Mathematical reasoning forms a basis for the standard IQ tests.
Linguistic	Primarily verbal, linguistic intelligence is another area important in IQ testing. Communication takes many forms, from sign language to writing and speaking and utilizes a specialized area of the brain.
Spatial	A navigator computes distance and location by the position of stars and therefore is an example of a person using spatial skills. Visual arts also employ spatial intelligence.
Interpersonal	Interpersonal skills allow an individual to notice and read the intentions, desires, and moods of others and does not depend upon language. This intelligence is important in working with others.
Intrapersonal	This intelligence demonstrates a knowledge of one’s internal range of emotions with the capacity to understand, regulate, and utilize them to guide one’s behavior. This intelligence is important in understanding and working with one’s self.

Naturalist	A person with a well-developed naturalist intelligence has the ability to distinguish between natural phenomena (plants, weather, etc.) through many of the senses, recognizing patterns.
Spiritual	Gardner describes this intelligence as a quasi intelligence in that it is difficult to separate from people’s beliefs in religion and God. It qualifies as an intelligence in its existential characteristics, i.e., asking the questions of why are we alive? What is love? What is the meaning of life?

Gardner defines three concepts of intelligence: giftedness—signifying “promise” in any field where intelligence figures; prodigy—where an individual shows unusual precocity; and expert—where an individual achieves a high level of competence within a domain becoming a genius when that work exerts a significant contribution to the domain such that individuals working in the domain will have to engage with that contribution (Gardner, 2006).

Ellis Paul Torrance (1970) proposed that learning creatively through problem-solving required abilities such as the ability to discern problems or inconsistencies, divergent thinking, and redefinition. “Learning creatively takes place in the process of becoming sensitive to or aware of problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; bringing together in new relationships available existing information” (Torrance, 1970, p. 1).

Steven Miles (2007) argues that our current fast-paced society requires young people to make many transitions in their lives. The changing demands of the marketplace make for an uncertain and risky future for young people today. In a study of Creative Partnerships, a United Kingdom government initiative, Miles found creative learning helps young people prepare for an uncertain future. He suggests that creative learning is closely tied to everyday creativity and that it enables young people to adapt and assert

their individual identity in the world. “Creative learning is about challenging dominant modes of thought in whichever arena those modes of thought may be reproduced” (Miles, 2007, p. 277).

Divergent thinking is contrasted with convergent thinking, which leads to one solution to a clearly defined problem. Divergent thinking requires multiple ideas or responses (ideation) and indications of creativity are seen in the originality of those ideas and responses (Plucker & Makel, 2010).

Divergent thinking (DT) has been researched extensively and is thought to be the primary indicator of creativity (Barron & Harrington, 1981; Guilford, 1967; Plucker, 1999; Runco, 2010; Russ & Grossman-McKee, 1990; Torrance, 1970). Runco cautions that DT is not synonymous with creativity, but rather is “useful for research on creative potential and the creative thinking that occurs in the natural environment” (Runco, 2010, p. 414).

Joy Paul Guilford is widely cited as the first researcher to describe the process of divergent thinking in his Structure of Intellect (SOI) model (Fairweather & Cramond, 2010; Kozbelt, Beghetto & Runco, 2010; Plucker & Makel, 2010; Torrance, 1970). His model “covers four types of *content* (semantic, symbolic, figural, and behaviors), five distinct *operations* (convergent production, divergent production, cognition, evaluation, and memory), and six different possible *products* (units, classes, relations, systems, transformations, and implications)” (Runco, 2010, p. 417). Divergent production entails fluency, flexibility, and originality (Kozbelt et al., 2010; Runco, Dow, & Smith, 2006; Starko, 2010).

In a study by Russ and Grossman-McKee, the ability of children to express primary process material (fantasy, imagination, free-association style) and affect in play were related to divergent thinking, confirming the importance of primary processes in creativity (Russ & Grossman-McKee, 1990).

Mark Runco and Selcuk Acar, (2012), analyzed the longitudinal studies performed by Torrance using the TTCT (Torrance Test of Creative Thinking). Torrance believed there were indicators of creative potential that would result in creative accomplishment. In the 1950s and 1960s Torrance tested students in grades one through six, then later tested students in grades seven through twelve. The most significant result of the first follow-up study was that TTCT was a better predictor of creative accomplishment than intelligence or achievement in high school. Again after a 50-year follow up, the TTCT predicted creative accomplishment related to personal achievement. The studies also showed men having higher public achievement and women having higher personal achievements. Runco et al. (2012), theorize this could be because of the limited opportunities for women in the 1950s and 1960s. Their overriding conclusion is “Apparently divergent thinking plays a role in certain kinds of creative expression and achievement, and does so throughout the lifespan” (Runco, et al, 2012, p. 367).

Talent Development

Much of the research involving talent development for young people has been done in the area of giftedness. Merriam Webster Dictionary defines giftedness as having a great natural ability or revealing a special gift (2014d). Rena Subotnik, Paula Olszewski-Kubilius, and Frank Worrell (2011), define giftedness as the “demonstration of performance at the extreme upper end of a talent domain relative to other high-

functioning individuals in the domain” (Subotnik et al., 2011, p. 3). They suggest that giftedness is developmental in that the beginning stages can be viewed as talent potential and the later stages as talent achievement as a measure of giftedness.

Joseph Renzulli’s (2012) Enrichment Triad Model is an integrated approach to learning, using problem-solving strategies for the purpose of effecting positive change or for creating meaningful products in an authentic environment. His model is based on the assumption that giftedness is developmental and that “gifted behaviors” can be promoted in young people. Renzulli’s belief is that one of the purposes of gifted education is that it allows young people the maximum opportunities for self-fulfillment by developing performance areas where superior potential exists. A secondary purpose is to increase the problem solving abilities of people who can contribute to solving some of the problems of modern society. Renzulli describes creative productive giftedness as enabling young people “to apply one’s abilities to problems and areas of study that have personal relevance and that can be escalated to appropriately challenging levels of investigative activity” (Renzulli, 2012, p. 125).

Renzulli (2012) asserts there are two models of learning, deductive and inductive. He describes deductive learning as that which typically takes place in the classroom. Deductive learning is structured training in knowledge and skill acquisition. It presupposes that the information taught will have transfer value for some future endeavor or life activity. Inductive learning, on the other hand, is “just-in-time” learning of new material or skills in the context of real-world situations.

Renzulli’s Enrichment Triad Model is based on the inductive model of learning and “the skills developed in this kind of learning are the best preparation for creative and

productive” endeavors (Renzulli, 2012, p. 130). He defines three types of enrichment: Type I are general exploratory activities; Type II are group-training activities; and Type III are individual and small group investigation of real problems (Renzulli, 2012).

Type I enrichment activities are designed to expose young people to problems, issues, theories, and possibilities that serve as a catalyst for internal commitment and purpose and allow creativity to emerge. They are designed to inspire and capture interest. Type II enrichment activities are individual to the young person’s developmental levels and prepare the young person to produce tangible products and/or generate solutions to real world problems through skill development and information gathering. Type III enrichment activities are individual or small group investigations of real-world problems resulting in products or solutions designed to have an impact on a targeted and authentic audience. The Enrichment Triad Model is a model that recasts the role of the learner into an investigator and creative producer of knowledge rather than a consumer of knowledge (Renzulli, 2012).

Sidney Moon, a professor at Purdue University (2012), generated a theory of personal talent. She defines personal talent as an “exceptional ability to select and attain difficult life goals that fit one’s interests, abilities, values, and contexts” (Moon, 2012, p. 165). Much of Moon’s work is centered in promoting adaptive social-emotional development among gifted youth. “High ability youth must develop the psychological knowledge and skills necessary to select appropriate goals and persist until they attain them, in spite of obstacles” (Moon, 2012, p. 165). Moon identifies a number of interventions researchers of personal talent have developed which are areas of potential for coaching.

One indirect intervention relates to stress and its effects on learning and performance. Researchers have found females are more likely than males to perform poorly under stress. Physical activity and stress reduction strategies were found to reduce stress (Moon, 2012). Catherine Good's work (2012) on the impact the sense of belonging has on persistence in a domain led to interventions increasing children's sense of belonging, an intervention to help reduce stress.

Another indirect personal talent intervention is adaptive feedback. Research indicates that in order for children to develop adaptive mindsets, they should be praised for their efforts and processes rather than the outcomes they achieve (Moon, 2012). Carol Dweck (2006) found that many children have maladaptive beliefs that intelligence is fixed. Her research forms the basis for this intervention. "The combination of appropriately structured, challenging tasks with process feedback can lay a solid foundation for the development of personal talent by encouraging gifted children to develop growth mindsets" (Moon, 2012, p. 168).

Direct interventions found to be effective were teaching strategies of time management and emotional regulation. Children were directly taught time management skills, emotional regulation, delay of gratification, and ways to handle failure and frustration. Another direct intervention found to be effective was direct instruction about the plasticity of the brain and the neurology of learning (Moon, 2012).

Predictors of Adult Creativity

John F. Wakefield (1992) analyzed a study on fifth-grade students who took a battery of tests measuring artistic inclinations and cognitive achievement. The students were also given the opportunity to draw, an open-ended exercise evaluated on originality

of the idea and the degree to which the idea was expressed. Follow-up interviews conducted with the parents of these students occurred when they were in high school. The intent was to determine if the students showing artistic talent were continuing to develop that talent. Wakefield's conclusion was that expert ratings of drawings for artistic merit were superior to measures of cognitive skill or ability in predicting an arts orientation. He suggests that originality and technical skill are better indicators in early attempts to discover talent in the arts (Wakefield, 1992).

Runco suggests that children exhibit the same cognitive abilities in creativity as adults, only to a lesser degree (Runco, 1996). Using Howard E. Gruber's Evolving Systems Approach, Runco suggests that the creative adult shows "a deep knowledge of his or her subject matter, is intrinsically motivated to work hard in the area, and has a strong emotional bond with what he or she is doing" (Runco, 1996, p. 60). He goes on to argue that children organize knowledge according to their interests. He suggests they have the motivation to work hard over an extended period of time, often exploring an interest for many years. He further states that children are capable of developing a passion for a subject matter or enterprise (Runco, 1996). According to Runco (1996), the greatest difference between the creative adult and the creative child is that the creative child cannot acquire the necessary expert knowledge to attain the highest levels of creativity, or eminence, that comes from years of work in a domain.

Joseph Renzulli's Three-Ring Conception of Giftedness attempts to explain the factors of human potential for productive creativity through three clusters of traits: above average ability, task commitment, and creativity (Renzulli, 2012). His model describes "those aspects of human activity and involvement in which a premium is placed on the

development of original thought, solutions, material, and products that are purposefully designed to have an impact on one or more target audiences” (Renzulli, 2012, p. 125).

Subotnik et al. (2011) propose giftedness as a developmental process that transforms potential talent in youth to outstanding achievement in adulthood. They cite various studies that posit that giftedness must be supported through training and interventions in domain-specific skills, in the acquisition of psychological and social skills necessary to pursue difficult new paths, and the conscious decision of the individual to engage fully in a domain (Subotnik et al., 2011, p. 6).

Factors in Creative Development

Two factors that negatively affect creativity in young people are a sense of belonging and stereotype threat.

Joshua Aronson has focused much of his research on the effects of stereotype threat on student achievement. His interest was driven by consistent data showing that even when college students had similar skills and abilities when entering college, black students did not perform as well as white students (Aronson, 2005).

In a study conducted by Aronson and Claude Steele in 1995, two groups of both black and white students were tested and compared. The control group of students took traditional evaluative tests of knowledge and intelligence. The other group of students was told the tests were non-evaluative and were to be used for psychoanalytical purposes. The results showed that black students in the non-evaluative setting scored significantly higher than the control group (Aronson & Juarez, 2012).

In a separate study where all test takers were assured of non-evaluation, half of the students were asked details of their demographic information. The results indicated

that being asked about one's race significantly negatively impacted the test scores of black students. Aronson concludes that it takes very little to turn a non-evaluative situation into a threatening one. White test-takers showed no significant changes in either test situation. Similar experiments with similar results were done with women showing a vulnerability to stereotype threat in math testing (Aronson & Juarez, 2012).

Building on Aronson's work, Catherine Good explored how one's sense of belonging and acceptance in an academic domain can also result in under-performance. She defines a sense of belonging as the "feeling that one fits in, belongs to, or is a member of the academic community in question" (Good, 2012, p. 41). Good suggests that women's performance in the STEM disciplines may be affected by stereotype threat. Her hypothesis is that women's under representation in math-related disciplines may be caused by dropping out of the domain due to a lower sense of belonging (Good, 2012).

Motivation

Many researchers have an interest in motivation as a factor in creativity; it is, in fact, an area of debate for many creativity theorists. Gail Lewis (1999) asserts that motivation is a key factor in overcoming the obstacles creative producers encounter and the lack of innovative support in the education system. Beth Hennessey asserts that creativity theorists "view high levels of task motivation and the human capacity to become lost in a project or problem as central to the creative process" (Hennessey, 2010b, p. 343).

A central theme in creativity research relative to creative motivation is the discussion of extrinsic versus intrinsic motivators (Amabile, 1996; Eisenberg & Thompson, 2011; Feist, 2010; Hennessey, 2010b; Starko, 2010). Extrinsic motivation is

characterized by doing something for an external goal outside of the task itself; intrinsic motivation is to engage in an activity for its own sake, for the pure enjoyment of it (Hennessey, 2010b).

Csikszentmihalyi studied play and its relationship to intrinsic rewards:

When an activity is able to limit the stimulus field so that one can act in it with total concentration, responding to greater challenges with increasing skills, and when it provides clear and unambiguous feedback, then the person will tend to enjoy the activity for its own sake. (Csikszentmihalyi, 1975, p. 60–61)

He defines this state as flow.

Teresa Amabile is widely cited in creativity research for her work on motivation in organizations. She developed the 3 Component Model of Creativity illustrated in a Venn Diagram as shown below (Amabile, 1996):



Figure 2.1 Amabile's Componential Theory of Creativity

In the model, expertise reflects domain-relevant skills; creativity skills reflect the cognitive and personality processes conducive to producing novel ideas and products;

and task motivation refers to intrinsic motivation. Not pictured in the model, but of equal importance in creative productivity according to Amabile, is the social environment (Amabile, 2012). She suggests that research in organizational settings show a number of practices that discourage creativity, such as criticism of new ideas, an emphasis on status quo, excessive time pressures, political problems within the organization, and a conservative, low-risk attitude of leadership. Environments conducive to creative endeavors encourage the development of new ideas, provide a sense of positive challenge in the work, allow the freedom to carry out the work, and have leaders with clearly articulated creativity-encouraging visions (Amabile, 2012).

Amabile (1996) asserts that while skills and expertise determine what an individual is capable of doing, it is task motivation that determines what the individual will actually do.

No amount of skill in the domain or in methods of creative thinking can compensate for a lack of intrinsic motivation to perform an activity. Without intrinsic motivation, an individual will either not perform the activity at all, or will do it in a way that simply satisfies the extrinsic goals. (Amabile, 1996, p. 7)

Amabile included the social environment in her model because it is the environment that often influences task motivation (Amabile, 2012).

Over the years, investigations on the “promise of a reward” (extrinsic motivation) for task completion have consistently shown that extrinsic rewards undermine intrinsic motivators and creativity (Hennessey, 2010b), leading Hennessey and her colleagues to what has become known as The Intrinsic Motivation Principle of Creativity (Hennessey, 2010a).

An astounding number of careful empirical investigations have shown that for the majority of persons in the majority of situations, the imposition of extrinsic constraints, including expected reward, is highly likely to have a negative impact on both intrinsic task motivation and creativity of performance. (Hennessey, 2010b, p. 353)

Kruglanski, Friedman, and Zeevi, (1971) found extrinsic rewards lowered both creative output and participants' enjoyment of tasks.

Citing Amabile and Hennessey's assertion that creative people are intrinsically motivated to complete a task, Daniel Fasko (2000) suggests that the education system should rethink using extrinsic motivators that undermine intrinsic motivation.

Although there is general agreement among researchers that intrinsic motivation encourages better performance on problem solving, Jacob Eisenberg and some of his colleagues have argued that when administered properly, rewards (extrinsic motivators) reinforce intrinsic motivation and creativity (Eisenberg & Thompson, 2011).

Eisenberg and William Thompson explored how competition affects the quality of musical improvisation (2011). They studied amateur musicians improvising on keyboards under competitive and noncompetitive conditions. They found that competition participants reported both higher stress and intrinsic motivation compared to participants not exposed to competition. They also found a higher positive correlation between competition participants and creativity in direct contrast to studies by Amabile and colleagues showing negative effects of evaluations and rewards. They suggest that a possible theory may be that for experienced performers, pressures of competition may

facilitate rather than inhibit creativity but may be detrimental to the novice (Eisenberg & Thompson, 2011).

Maja Stanko-Kaczmarek studied 36 fine arts students to gain a deeper understanding of the effect of intrinsic motivation on affect, subjective evaluation, and the creative process (2012). This study was unique in that it evaluated the affect and subjective evaluation of the participants at consecutive stages of the creative process. The results showed that more positive affect and higher evaluation of one's own work are associated more with intrinsic motivation compared to extrinsic motivation. Surprisingly, there was no difference in the level of creativity of products in both motivation conditions. The higher levels of fine arts experience of the participants may explain this result (Stanko-Kaczmarek, 2012).

Summarizing Smith and Carlson's work on the motivational forces behind the development of creativity, Claxton and Pannells (2005) state they found that a slump in creative motivation occurs between ages 7 and 8, peaking at ages 10 to 11, then declining again at age 12. After age 12, there is a steady rise in creative motivation until peaking again at age 16.

Gail Lewis suggests "If motivation is important to the development of creative potential, it would be helpful to determine exactly which motivational factors are important at each stage and how they change over time" (Lewis, 1999, p. 197).

Creativity Slump

Creativity, as it develops in children, is a puzzle to researchers in creativity, education, and psychology. As children grow and develop, it would seem natural to

assume that their thoughts would be richer in content and they would become more creative. This has not been the case (Lau & Cheung, 2010).

The trends of children's creativity development indicate creativity rises from grades one to three, decreasing significantly in fourth grade, and rising again in grade five. Another drop in creativity occurs in grades six and seven, with creativity scores rising again through high school (Yi, Hu, Plucker & McWilliams, 2013). Torrance first demonstrated the "fourth grade slump" through the Torrance Test of Creative Thinking (TTCT) (see Plucker & Makel, 2010; Yi et al., 2013).

Sing Lau and Ping Chung Cheung (2010) studied the creativity of Chinese children grades four to nine. They found creativity scores rose from grades four to five, then dropped from grades six to seven, then rose from grades seven to nine. They also found patterns in gender differences. In grades four to six, boys scored higher than girls on creativity indexes. In grades seven and eight, girls outscored boys on fluency, flexibility, uniqueness, and unusualness. In grade eight, girls also outscored boys on verbal flexibility. The differences narrowed at grade nine (Lau & Cheung, 2010, p. 229). Researchers speculate these differences may be caused by older children's need to conform to peer pressure; they are less likely to take risks and make mistakes (Claxton & Pannells, 2005; Lau & Cheung, 2010).

Xinfa Yi, Weiping Hu, Jonathan Plucker, and Jenna McWilliams (2013) studied the effects of school climate on Chinese children's creativity between the ages of 10 and 16. Their findings suggest that creative development in children is more complicated than past studies on divergent thinking demonstrate. Their studies provided evidence that creativity scores in elementary school were significantly higher than children in middle

school. Their results indicate that the creative organizational climate of the school had a significant impact on creativity as measured in their study, with both dropping as children progressed through the school system. Further, their findings indicated a slump similar to American children but much later, between the ages of 14 and 16 in Chinese children (Yi et al., 2013).

Environment

Aaron Kozbelt, Robert Beghetto, and Mark Runco (2010) examined the research on developmental theories affecting children related to creativity. They found that children growing up in homes that expose them to diverse experiences and allow them moderate independence appear to be more creative. Another theory involves birth order. Research on family structure found that middle children are often rebellious and revolutionary. Researchers theorize that middle children, in an effort to get attention, may direct their rebellion to creating unique niches in thinking or in artistic endeavors (Kozbelt et al., 2010).

LeoNora Cohen and Judith Gelbrich (1999) explored the research on the relationship between early childhood interests and creativity. Exposing children to many possibilities at a young age, facilitated by supportive adults, may lead to passionate interests. Citing the work of Bruno Bettelheim, Cohen and Gelbrich (1999) propose that children use interests to work out profound questions or problems. They suggest that children allowed to develop and follow their interests prepare for mastery in a domain. As interests develop and evolve, the possibilities for higher levels of creativity increase. Research indicates that gifted children are found to have more intense and varying

interests. Cohen and Gelbrich (1999) acknowledge there is little research linking childhood interests to adult creativity and suggest this as an area for further research.

Russ and Fiorelli (2010) cite a study indicating parents using a child-rearing approach of giving children time to daydream, encouraging exploration, letting children make their own decisions, and permitting questions and discussions, had children who were more creative than children of more restrictive parents. Citing a study by Singer and Singer, Russ, and Fiorelli (2010) suggest that households utilizing reasoning in child rearing as opposed to physical discipline had children displaying more imagination.

Frank Sulloway (1996) studied prominent historical figures to determine what forces inspire people to reject conventional wisdom and go on to revolutionize the current thinking of the day. One of the trends he examined was functional birth order.

Functional birth order is determined by the birth order one is raised in, not biological birth order. He concluded that firstborns are more likely to reject new ideas and to advocate for status quo and that “laterborns” are more likely to rebel against the status quo, be open to innovation and novel ideas, and to be risk-takers (Sulloway, 1996).

In his study of scientific eminence, Sulloway found that firstborns were more associated with modest eminence,;however, differences tend to disappear once eminence is controlled for family size and social class. In the upper classes, laterborns were more likely to become eminent in the life sciences and having multiple scientific interests was a greater prediction of eminence. In the lower classes, firstborns were more likely to be eminent in the physical sciences. Within each class, however, firstborns were more likely to choose the straightforward path to eminence while laterborns tended to choose more unconventional paths (Sulloway, 1996).

In a review of the literature on high school dropouts, Kyung Kim and Michael Hull (2012) found that gifted dropouts showed signs of maladjustment, negative and rebellious attitudes toward authority, nonconformity, hostility, suspiciousness, oversensitivity, egotism, and poor peer relationships—all related to creative personalities. They also found that gifted female students drop out as much as male gifted students and that more students drop out because of their dislike of the school environment rather than because of financial pressures or low academic achievement (Kim & Hull, 2012). When testing for creative potential, the results indicated that being creative increases the odds of dropping out of high school. They also found that students' involvement in clubs and other school activities increasing their sense of belonging, was a deterrent to dropping out (Kim & Hull, 2012).

Repressive, anticreative school environments can encourage students to react with maladaptive behaviors, including underachievement and dropping out of school. To discourage underachievement and dropping out, schools need to offer extracurricular activities to promote outlets for creative energy. Students' creative out-of-school activities are significantly positively related to late achievement in their young adulthood. (Kim & Hull, 2012, p. 175)

The academic achievement gap between high and low socioeconomic backgrounds is well documented, however David Yun Dai and colleagues wanted to find out if there was a creativity gap as well (Dai et al., 2012). They studied creative potential as indicated by fluency, flexibility, and original ideation. The results mirrored that of the achievement gap, with the higher income school and community reflecting higher levels of creative potential. They also found a strong relationship between creative potential

and academic achievement and cognitive motivation (Dai et al., 2012). Dai and his colleagues caution that this study was preliminary and more research is needed as the factors and variables and how they relate to each other are complex.

R. Osche, cited by Gail Lewis (1999), studied the lives of eminent creators and found the values of the family affect the motivation of young creators by providing direction. Osche also determined that coping mechanisms from stress in their early lives could propel eminent creators towards creative endeavors as a way to escape problems (Lewis, 1999).

Assessing Creativity

Describing the numerous creativity assessments available is beyond the scope of this project; I will limit my discussion to some of the better-known assessments and ones relevant to coaching youth in personal creativity. Creativity has traditionally been assessed through psychometric methods in four areas: creative processes, personality and behavior, products, and environments (Plucker & Makel, 2010). Tests for divergent thinking (DT) are generally used to assess the creative process, scoring on fluency (the number of ideas), flexibility (the number of themes in the ideas), originality, and elaboration of ideas. The most widely used are Guilford's Structure of the Intellect (SOI), Alternate Uses by Wallach and Kogan, and Torrance Tests of Creative Thinking (TTCT) (Plucker & Makel, 2010). DT tests contain open-ended questions requiring multiple responses in the form of solutions or ideas (Runco et al., 2006).

Kyung Kim used a meta-analysis of IQ tests and divergent thinking tests to predict creative potential. She determined the Torrance Tests of Creative Thinking (TTCT) were the most accurate predictors of creativity (Kim, 2008). The TTCT measure

the processes of divergent thinking and are the most widely used in educational settings (Starko, 2010). The TTCT is available in both verbal and figural forms and tends to be time-consuming to score. The validity of the tests varies according to different studies, suggesting that the conditions under which the tests are given have an impact on the scores (Starko, 2010).

One criticism of tests measuring only divergent thinking as an indicator of creativity is that it is considered a narrow measure of creativity (Barron & Harrington, 1981; Furnham et al., 2009; Johnson & Fishkin, 1999; Lubart & Guignard, 2004; Plucker & Makel, 2010; Runco & Acar, 2012; Wakefield, 1992). Runco and Acar (2012) suggest that DI is not a test of creativity but rather an estimate of potential for creative problem solving.

Personality traits are assessed to determine an individual's predisposition to creativity. Studies of individuals already considered creative yield personality traits that are then used as a form of comparison under the assumption that an individual having similar traits would also be deemed creative (Plucker & Makel, 2010). There are many tests measuring creative personality traits. One example is the Big Five NEO-Five Factor Inventory developed by Paul Costa and Robert McCrea, based on a factor analysis of personality structure (Feist, 1998). Five major personality traits were extracted from the analysis and used to determine creative predisposition: extraversion, agreeableness, conscientiousness, neuroticism, and openness. Another example is a 30-item checklist, the Creative Personality Scale (CPS), developed by Harrison Gough. Gough's checklist was developed through an item analysis of George Domino and Charles E. Shafer's personality scales and George Welsh's four types of cognitive function (Gough, 1979).

Two self-report instruments used to measure activities are the Creativity Achievement Questionnaire (CAQ) developed by Carson, Peterson, and Higgins and the Runco Ideational Behavior Scale (RIBS) developed by Mark Runco. The CAQ assesses creativity across domains and the RIBS tests for ideation. (Plucker & Makel, 2010).

GIFT (Group Inventory for Finding Talent) developed by Sylvia Rimm, examines affective behavior and biographical characteristics of students for creativity (Johnson & Fishkin, 1999). It is a self-report form designed to assess the creative potential of students in grades one to six. Students respond to statements assessing the traits of independence, flexibility, curiosity, perseverance, interests, and past creative hobbies (Starko, 2010).

Two similar tests to the GIFT are the Group Inventories for Finding Interests (GIFFI) I and II, however they assess junior and senior high school students, respectively. One criticism of the tests, undermining their effectiveness, is that they have some cultural bias (Starko, 2010).

Plucker and Makel note “mounting evidence suggests that creative personality characteristics are developmental in nature with the potential for greatest change occurring during adolescence and young adulthood” (2010, p. 56).

Some researchers believe assessing products for creativity is largely a function of the environment (Amabile, 1996; Cropley & Cropley, 2010; Csikszentmihalyi, 1996). The Consensual Assessment Technique (CAT), originally developed by Teresa Amabile and further developed by others is considered the Gold Standard of assessment because it assesses the productive result of creativity (Baer, 2010). Experts within a domain rate creative products through comparison. Products deemed creative are a function of the

environment because judges with varying abilities, expertise, experience, and opinions determine their creative value (Baer, 2010; Plucker & Makel, 2010).

The Student Product Assessment Form, developed by Sally Reis, is a way to test students' products for creativity. The test uses eight measures of students' creative processes and seven components to rate the final product (Johnson & Fishkin, 1999; Reis & Renzulli, 1999).

Robert Sternberg (2012) suggests that creativity is a habit developed, in other words; it becomes a way of life and, therefore, should be assessed in that context. He suggests standardized tests, by their very nature, discourage creativity. He argues that creative people develop creative attitudes, routinely approaching problems in creative ways. Sternberg (2012) developed a battery of tests in creativity, both verbal and nonverbal, that test students from late elementary through adulthood. The test results are limited in that they have tested limited populations and have not attempted to test in all domains. The results confirmed that a combination of components: intellectual abilities; knowledge; styles of thinking; personality; motivation, and environment are predictors of creativity.

Plucker & Makel (2010), in their comprehensive review of creativity assessments, view the depth of psychometric testing as a strength. However, they cite the lack of predictive, consistent, validity evidence of creativity testing as a weakness. They call for more original approaches to creativity assessment and more cross-disciplinary studies.

Coaching

Introduction

As a fledgling profession, coaching is challenged by no clear definition of coaching theory, practices, and definitions. “Lacking any substantive grounding in science, the life coaching industry is currently propelled by a steady stream of anecdote and hyperbole; and lacking any form of regulation, it is a confusing and difficult industry for potential customers to navigate” (Spence & Grant, 2005 p. 159). Because it draws heavily from the fields of psychology, sociology, organizational development, sports coaching, philosophy, and business consulting, there are many overlaps in practice and theory (Brock, 2008).

One challenge faced in determining contributions from related disciplines is that many disciplines are interconnected and influence each other in the natural, social, and behavioral sciences. Thus, crediting a specific contribution to a specific discipline used data from literature, surveys, and interviews. The data indicate that the root disciplines contain the elements of coaching and that what is distinct about coaching is the way in which the elements are combined. (Brock, 2008, p. 450)

In this section, I will attempt to make the distinctions between teaching, tutoring, mentoring, consulting, counseling, and coaching. Sandra Lindgren surveyed youth coaches and found that they come with many differing backgrounds. The backgrounds most frequently mentioned were therapist/counseling, social work, nursing, psychology and positions working with youth (Lindgren, 2011, p. 85). As Brock mentioned, many of the same skill sets are used in teaching, counseling, consulting, tutoring, mentoring, and

coaching, but they are integrated in differing ways (Brock, 2008). Coaching youth is distinct from coaching adults in that a coach may need to employ teaching, consulting, mentoring, tutoring (or counseling if the coach is also a therapist) as well as coaching when working with youth. Understanding the stages of adolescent development and the needs of the youth client are important in determining when to employ these skills.

Below is a table of the Merriam-Webster’s dictionary definitions of mentors, tutors, consultants, counselors, teachers, and coaches.

Table 2.2 Webster’s Dictionary Table of Definitions

Discipline	Definition
Mentor	A person who teaches or gives advice or guidance to (someone, such as a less experienced person or a child) (Merriam-Webster’s, 2014e).
Tutor	A person who teaches or guides usually individually in a special subject or for a particular purpose: coach (Merriam-Webster’s, 2014g).
Consultant	A person who gives professional or expert advice for a fee (Merriam-Webster’s, 2014b).
Counselor	A person who gives advice as a job; a person who counsels people (Merriam-Webster’s, 2014c).
Teacher	Something that is taught: the ideas and beliefs that are taught by a person, religion, etc. (Merriam-Webster’s, 2014f).
Coach	A person who teaches and trains athletes and performers (Merriam-Webster’s, 2014a).

Personal coaching or life coaching are not defined in the dictionary. However, the International Coach Federation, the largest professional association of coaches, defines coaching as “partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential” (ICF, 2013a). The Association for Coaching (AC) defines personal coaching as, “A collaborative solution-focused, results-orientated and systematic process in which the coach facilitates the enhancement of work performance, life experience, self- directed learning and personal growth of the coachee” (AC, 2012).

In 2011, the International Coach Federation (ICF) commissioned a global study with the purpose of providing an up-to-date picture of the coaching profession (ICF, 2012). As a profession, coaching has been steadily growing. ICF membership has risen from 11,000 in 2006 to over 20,000 in 2011.

The ICF (2013b) distinguishes coaching from therapy, consulting, mentoring, training, and athletic development:

Table 2.3 ICF Table of Definitions

Therapy —deals with pain and dysfunction, resolving difficulties from the past	Coaching —is future focused, and the emphasis is on self-initiated change through action, accountability, and follow through.
Consulting —problems are diagnosed and solutions implemented	Coaching —teams and individuals capable of generating their own solutions
Mentoring —wisdom and guidance are provided based on mentor’s experience	Coaching —does not include advising; objectives are set by the coachee
Training —objectives are set by the trainer and assumes a linear path of learning	Coaching —objectives are set by the coachee and the process is not linear
Athletic Development —the athletic coach is an expert that guides and can focus on behaviors that need to be corrected	Coaching —the direction is based on knowledge of the coachee and the focus is on developing strengths and capabilities

Robert Biswas-Diener (2009), psychologist and life coach, states the biggest distinction between coaching and therapy is in the clients they work with and the purpose of the work. Psychotherapy focuses on the treatment or “fixing” of mental illness, whereas coaching focuses on helping already high-functioning people perform even better. He goes on to cite another major difference between the two disciplines. Coaching facilitates a client-initiated change, whereas therapy is based on the therapist’s expertise in diagnosing and treating disease (Biswas-Diener, 2009).

Lloyd Thomas, a life coach and psychologist, makes the distinction between consulting, coaching, and therapy (personal communication, January 21, 2014). He states that consultants focus on problem-solving in the present to achieve desired goals for the future, a therapist focuses on freeing the client from past trauma, abuse, or loss, guiding the client until he or she is ready to guide his own life, whereas a coach is focused on the client’s self-discovery and learning through action, so that the client’s dreams and desires come true in the present.

Sports coaching is similar to personal coaching in that coaches do not have to be trained or have any certification to coach. Many sports coaches are volunteers. However, the focus and outcomes in sports coaching differ from personal coaching and are more specific. Most sports coaches focus on the physical, psychological, and social development of the youth they coach (Hedstrom & Gould, 2004). In the Research Digest by the President’s Council on Fitness, Sports, and Nutrition, author Daniel Gould suggests four outcomes of sports coaching based on the work of Jean Côté and Wade Gilbert:

(a) improving competence relative to the physical and mental skills needed for athletic performance; (b) confidence to execute those skills; (c) connection through communicating and fostering good coach-athlete relationships; and (d) character in the form of psychosocial skills and attributes, such as the ability to set and foster goals, and teamwork or moral values that may be developed through participation in the sport, such as fair play. (Gould, 2013, p. 2)

Thomas Crane (1998) suggests mentoring differs from coaching in that it generally involves a more experienced and mature person sharing his or her wisdom with a younger, less experienced person within an organization. “Mentoring typically addresses issues of inculturation, career growth, political savvy, and personal networking within the organization” (Crane & Patrick, 1998, p. 37).

Most researchers agree that there are many differing theories and definitions of coaching (Biswas-Diener & Dean, 2007; Brock, 2008; Costa & Garmston, 1994; Grant, 2003; Whitmore, 1996). Anthony Grant (2003) suggests that there are a wide range of populations and issues that fall under the general term *coaching*. He cites the examples of peer coaching in education, cognitive training for learning disabilities, resolving relationship difficulties, career coaching, job coaching, executive coaching, and others (Grant, 2003). He goes on to state that the broad spectrum of coaching is what makes it difficult to define.

Jeffrey A. Kleinberg (2003) reviewed the literature on coaching, and found that there was “no universal explanation of a ‘coaching’ theory” (p. 45).

Grant suggests, “Professional coaching can be considered an emerging cross-disciplinary occupation, its primary purpose being to enhance wellbeing, improve performance and facilitate individual and organizational change” (Grant, 2005, p. 1).

Robyn McKay and Thomas Kirsch (2009) define personal coaching as assisting well-functioning clients through life transitions or for spiritual growth.

Coaching heavily influences business and where it is most frequently applied and practiced (Brock, 2008). Although Brock’s review of the coaching literature is extensive, Brock did not mention youth coaching in her work. Grant (2007) asserts that life-coaching research has focused primarily on the adult population.

In a survey of youth coaches, S. Lindgren (2011) found coaches working with youth in a variety of areas: visioning, goal setting, managing change, strengths; values, career exploration, critical thinking, to name a few. Creativity was not listed as an area of focus.

One of the conditions inherent in fostering creativity is providing a safe environment for risk-taking (Russ & Fiorelli, 2010). Studies show that increases in stress levels lead to increased levels of cortical activation in the brain with resulting decreases in creativity (Kaufman et al., 2010). Aronson and Juarez found that environments that were more evaluative and judgmental negatively affected the performance of students, in particular with students possessing a threat mindset (2012). Climates that support ideas, freedom of thought, and psychological safety are conducive to more creative development (Keller-Mathers & Murdock, 1999).

Coaching is a process that is inherently nonjudgmental and trusting (Biswas-Diener & Dean, 2007; Whitmore, 1996; Whitworth, Kimsey-House & Sandahl, 1998), and creates an environment of safety for developing personal creativity.

Subotnik et al. (2011) suggests that talent development must be supported by society. “Individual abilities are malleable, need to be deliberately cultivated, and do matter, particularly abilities in specific talent domains; different talent domains have different developmental trajectories, varying as to when they start, peak, and end” (2011, p. 4). Coaching is one way to support talent development and personal creativity in a nonjudgmental and trusting environment.

Youth Coaching Models and Research

Parnes and Noller, cited by Fasko (2000), conducted a longitudinal study of freshman college students who were enrolled in a 2-year creativity program. The study indicated that students completing the course:

(a) demonstrated better ability to cope with real-life situational tests, (b) applied their creative abilities better in English courses, (c) performed better on the semantic and behavioral parts of Guilford’s (1985) SI model, (d) reported that the program helped in other courses, (e) showed year-to-year improvement, and (f) were more productive in their nonacademic achievement where creative performance was required. (Parnes & Noller, 1972, pp. 164–165)

Three quarters of the students dropped out before the end of 2 years, only one quarter saw it through (Fasko, 2000).

Dr. Eric Bettinger and Rachel Baker (2011) evaluated the results of InsideTrack, a student coaching service for college students, over a 2-year period. Students were

randomly selected to participate. In individual coaching sessions, coaches worked with students in developing their goals, assisting them in connecting short term and long term goals, and supporting them in building self-esteem, time management, self-advocacy, and study skills. The study showed that retention (staying in college) and completion (attaining a degree) gains were significantly higher with students receiving coaching when compared to other interventions (Bettinger & Baker, 2011).

Suzy Green, Anthony Grant, and Jo Rynsaardt (2007) studied the effectiveness of a life-coaching program for senior high school women (ages 15 to 18) in Australia. Teachers were trained as coaches and delivered 10 life-coaching sessions over two terms. The study investigated the impact of an evidence-based life-coaching program in an educational setting designed to assist students (who were not dysfunctional or at-risk), in increasing cognitive hardiness and hope, and in decreasing depression, anxiety, and stress.

The participants selected two issues they wished to be coached on; one school-related and one personal. Each session involved setting session goals. The purpose of the coaching was to raise the participant's awareness of their current situation, identify personal resources that could be utilized to forward them in their goals, and to develop self-generated solutions and action steps. The study provided evidence that a life coaching group program can be effective in increasing hope and cognitive hardiness, and in decreasing self-reported symptoms of depression. Life coaching, however did not appear to affect anxiety and stress, a perplexing phenomena for the program administrators (Green, Grant & Rynsaardt, 2007).

In a separate study, Wendy Madden, Suzy Green, and Anthony Grant (2011) examined the results of a strengths-based coaching program to primary school males (mean age 10.7) in Australia. The participants were coached in groups of four or five for eight sessions over two terms. The program stems from the study of well-being in positive psychology and investigated the impact of strengths-based coaching in an educational setting on students' levels of engagement and hope (Madden et al., 2011). The term engagement in this context is similar to Csikszentmihalyi's "flow" and consists of a "loss of self-consciousness and deep engagement in the task at hand, and can occur when people deploy their highest strengths to meet the challenges that come their way" (Madden et al., 2011, p. 73).

Citing Linley and Harrington's definition of *strength*, Madden, et al., defined it "as a capacity for behaving, thinking and feeling in a way that promotes successful goal achievement" (Madden et al., 2011, p. 74). Hope is thought to be important to goal attainment, in particular when encountering challenges and setbacks (Madden et al., 2011). The program was in three parts: part one focused on raising self-awareness of personal strengths, part two focused on identifying and utilizing personal resources towards goal attainment, and part three focused on coaching the participants through the self-regulation of setting goals and developing specific action steps (Madden et al., 2011).

The study was a small-scale pilot serving as a preliminary investigation into strengths-based coaching in a school setting. The program was associated with increases in students' self-reported levels of engagement and hope, illustrating how evidence-based

coaching methodologies can be integrated into an educational setting (Madden et al., 2011).

Lorne Ellingson and Linda Page (2004) conducted a pilot study of a small group of Native students in Canada receiving coaching. It was expected that coaching would improve student self-esteem and academic performance. Due to invalid follow-up testing, no quantitative data to support an improvement in self-esteem was available. However, student reports indicated the experience was positive (Ellingson & Page, 2004).

Marilyn Campbell and Sallie Gardner (2005) conducted a study to assess the effects of life coaching with senior students in an education setting. Findings indicate that life coaching helped increase the students' motivation and goal setting abilities and has the potential for building resilience and well-being (Campbell & Gardner, 2005).

Cognitive Coaching was developed in the 1980s by Art Costa and Bob Garmston (1994) for school administrators to use with teachers. There are three goals to Cognitive Coaching: establish and maintain trust; facilitate mutual learning; and enhance growth toward "holonomy" (individuals acting autonomously while at the same time acting interdependently with colleagues). Costa and Garmston identified four reasons to implement coaching in the education system:

- Cognitive coaching enhances the intellectual capacities of teachers, which in turn produces greater intellectual achievement in students.
- Few educational innovations achieve their full impact without a coaching component.
- Working effectively as a team member requires coaching.

- Coaching develops positive interpersonal relationships that are the energy sources for adaptive school cultures and productive organizations. (Costa & Garmston, 1994, p. 6–7).

Jenny Edwards (2003) studied the outcomes for Cognitive Coaching, identifying eight areas that benefited teachers and students:

- Increased student test scores with more focus on student learning, more thinking skills, and decreased referral of students to special education
- Greater teacher reflection
- Greater teacher satisfaction
- More professional school cultures
- Increase in teacher efficacy
- More collaboration among teachers
- Professional benefits for teachers with positive impact on teaching processes and attitudes toward teaching
- Personal benefits for teachers such as increased confidence, self-growth, and increased creativity

Edwards suggests the Cognitive Coaching model should be expanded to coaching youth (Edwards, 2003).

Coaching Within an Organization

Many youth coaches work with youth in settings other than coaching; social work, psychology, sports coaching, teaching, nursing, mentoring, or tutoring (Gentry & Campbell, 2002; Lindgren, 2011). Coaching within organizations may be a better fit for coaching youth than individual coaching, in particular for those coaches filling dual roles,

examples of which are mentioned in the preceding sentence. In addition, the unique needs and logistical situation of adolescents, such as lack of transportation, shorter attention spans, and time constraints (Lindgren, 2011) may facilitate coaching within organizations or in settings other than a one-on-one coaching practice. Lindgren (2011) suggests the cutting edge of coaching youth is in an educational setting. According to Campbell and Gardner (2005), South Dakota encourages school counselors to learn life-coaching skills.

Spence and Grant (2005) studied the effectiveness of both individual and peer coaching. Coaching, in either format, assisted participants in goal attainment, satisfaction, and a greater sense of control. The data also suggested that participants receiving professional coaching felt a greater sense of goal mastery. The peer-coaching group appeared to disengage from goal striving and the coaching process in spite of benefitting from several positive outcomes. This outcome could be the result of the lack of professional coaching in the peer-coaching group (Spence & Grant, 2005).

Jean Hurd (2003) studied the effect of organizational coaching on individual lives through in-depth interviews with individuals receiving coaching services for at least 6 months. Her findings indicate that through coaching individuals knew themselves better, related better with others, and developed approaches to address challenging situations (Hurd, 2003). She concluded that coaching at the organizational level created a ripple effect, enabling individuals to develop skills of critical thinking and reflectivity and to hone emotional intelligence skills (Hurd, 2003). Understanding why youth do not seek individual coaching services as often as adults and the feasibility of coaching youth in organizations are areas for further research.

CHAPTER 3
THREE-TIERED MODEL: COACHING YOUTH TO STRENGTHEN
PERSONAL CREATIVITY

Introduction

Jacquelyn Gentry and Mary Campbell (2002) assert that most adults have a negative view of adolescents.

The truth is that adolescents, despite occasional or numerous protests, need adults and want them to be part of their lives, recognizing that they can nurture, teach, guide, and protect them on the journey to adulthood. Directing the courage and creativity of normal adolescents into healthy pursuits is part of what successfully counseling, teaching, or mentoring an adolescent is all about.(Gentry & Campbell, 2002, p. 3)

I would include coaching to their list.

Lindgren (2011) developed a model for coaches interested in coaching youth. She suggests youth coaches require training or experience in adolescent development due to the unique needs of this age group. The table below lists some of the developmental stages and issues affecting youth (Gentry & Campbell, 2002):

Table 3.1 Adolescent Development

Physical Development	Puberty, sexuality, body image, physical activity, disordered eating
Cognitive Development	Moral, learning styles, learning disabilities
Emotional Development	Developing a sense of identity, self-esteem, emotional intelligence, gender/ethnic/sexual diversity and differences
Social Development	Peer relationships, dating and sexual behavior, family/school/work relationships, community and faith influences
Behavioral Development	Risk-taking, alcohol and drug abuse, school failure, pregnancy and sexually transmitted diseases, delinquency and violence

Model for Coaching Youth to Strengthen Personal Creativity

Figure 3.1 Coaching Youth to Strengthen Personal Creativity



The foundation of the model is self-awareness; it is through self-awareness that change takes place. However, knowledge is necessary to facilitate self-awareness, in particular with youth who have limited background knowledge and life experiences. Specific strategies for coaching youth for the purpose of strengthening their personal creativity are at the top of the model.

Table 3.1 Coaching Youth to Strengthen Personal Creativity

SELF-AWARENESS	KNOWLEDGE	STRATEGIES
Passions, interests Barriers to creativity Reactions, emotions Flow Motivation	Creativity —personal, everyday, and eminence Creativity processes Barriers to creativity Multiple intelligences Motivation—intrinsic, extrinsic	Cultivating resilience, openness, and curiosity Use of inquiry and wonderings SCAMPER Problem finding and solutions to real life issues

	Problem-solving processes Goal-setting processes	Brainstorming Analogies/metaphors Goal setting – intention setting, written, Goddard <i>Artist's Way</i> and <i>Artist's Way for Parents</i> Six Thinking Hats
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Self-Awareness

The foundation of this model is self-awareness. Beginning in adolescence, youth become aware of themselves in relation to their peers. They become more self-reflective which “often leads to an increased sense of self-consciousness, because adolescents assume that others are also observing and evaluating them” (Meece, 1997, p. 330). It is at this time, when adolescents focus more on peers, that their identity formation reaches a crisis point (Bester, 2007). The first tier of my model is self-awareness. At a time when adolescents are focused on comparing themselves to their peers, assisting them in their awareness of self—emotions, desires, interests, and experiences—is a necessary component to developing and appreciating their own personal creativity. Self-awareness is a key focus in coaching.

One of the findings in Lindgren’s interviews of youth coaches was that one of the top developmental needs addressed in youth coaching was self-awareness (Lindgren, 2011, p. 113).

“The *first* key element of coaching is AWARENESS, which is the product of focused attention, concentration and clarity. . . . awareness also encompasses self-awareness, in particular recognizing when and how emotions or desires distort one’s own perception” (Whitmore, 1996, p. 28). Whitmore posits that awareness is empowering

because we can only control that which we are aware of, what we are unaware of controls us. He clarifies the distinction between awareness and self-awareness as, “Awareness is knowing what is happening around you, self-awareness is knowing what you are experiencing” (Whitmore, 1996, p. 30).

“Self-awareness is being conscious of everything that goes on inside of you: your sensations, feelings, thoughts, perceptions, memories, images, experiences, and so on. Self-awareness allows us to remember a past, anticipate a future, and be conscious of the present” (Williams & Thomas, 2005, p. 31).

Otto Laske suggests that “between ages 25 and 100, adults pass through up to 16 levels of self awareness” (Laske, 2004, p. 57). Perhaps this explains why self-awareness is a key component for coaching at all ages.

Robert Hargrove, a business coach, proposes that a coach is someone who helps the coachee to become aware in four ways: first by seeing what the coachee cannot see, then by helping him/her step back from a situation for a different perspective, by helping the coachee see the difference between his intentions and thinking or actions and finally, by helping her through patterns of self-deceptions and defensive thinking (Hargrove, 1995 p. 148).

Christina Douglas and William Morley describe the heart of coaching as “providing assessment feedback, building self-awareness for desired behavioral changes, and planning a developmental path” (Douglas & Morley, 2000, p. 42).

Tim Gallwey describes the principles of his coaching model, the Inner Game, as nonjudgmental awareness, trust in self, and choice.

Awareness was about knowing the present situation with clarity. *Choice* was about moving in a desired direction in the future. And *Trust* in one's own inner resources was the essential link that enabled that movement. Each side of this triangle complemented and supported the other. (Gallwey, 2000, p. 15)

Researchers evaluating the effectiveness of a coaching program for high school students stated the aim of the program was to “raise the coachee’s personal awareness of their current situation” (Green et al., 2007, p. 27).

A healthily developed awareness includes the capacity to accurately and clearly perceive and give meaning to everything that affects your life. Self-awareness is the means whereby adults define themselves or, in other words, develop a self-concept. This awareness determines all behavior. Self-awareness can be accurate or inaccurate, positive or negative. . . .The more you learn about yourself and how you function, the larger your self-awareness becomes. (Williams & Thomas, 2005, p. 32)

Williams and Thomas suggest expanding self-awareness through paying attention to the senses, in particular as to how the senses are combined to create life experiences. They also suggest looking at experiences from different perspectives, practicing the skill of mindfulness, meditation, making the distinction between who the coachee is versus what he does and how he performs, and by assisting the coachee to stop judging his/herself negatively in order to increase his or her self-esteem.

Coaching young people to become aware of their interests and passions is helpful in identifying potential areas of creativity. Ken Robinson’s premise is that we are all born with immense talents that we fail to develop properly and often are not even aware

of (2011). He goes on to say, “Helping people to connect with their personal creative capacities is the surest way to release the best they have to offer” (2011, p. 139).

Cohen and Gelbrich examined the research on interests as it relates to creativity and youth. They found that a difference between adults and youth is that young people are largely unconscious of having an area of interest (Cohen & Gelbrich, 1999). They caution that although children’s interests have been studied extensively, there is not a framework that explains how or why interests develop; however, they suggest that, “as interests evolve, higher levels of creativity become possible” (1999, p. 161). They maintain that exposing children to many different experiences allows the opportunity for diverse interests to develop.

Robert Vallerand et al. (2003), suggest that harmonious passion is a form of intrinsic motivation that happens when a person’s passion becomes a part of his identity, defining who he is. It is what drives a person to invest the time and energy into an activity. “Personal interests are often motivators for youngsters to commit to the hard work involved in creative productivity” (Renzulli & De Wet, 2010, p. 29). “Interests play a crucial role in learning and in high levels of creative productivity” (Starko, 2010, p. 28). Thus, a starting point for coaching personal creativity is to assist youth in increasing their self-awareness in general, in encouraging them to explore a variety of experiences, and in identifying their interests and passions in particular. Self-awareness requires self-reflection. “Self-reflection does not come naturally to many people (Jordan & Troth, 2002), and so the coach may need to find ways to develop action plans that focus on observable, easily monitored behaviours” (Grant, 2012, p. 159).

Knowledge

Young people do not always have the experience or background knowledge to assist them in developing as creative persons. Sharing information on the creative process and the barriers to creativity will help the coach in setting up a framework for working with a young client(s). Knowledge gives the young coachee a reference point for moving forward. “Knowledge and skills that increase resilience, positive emotion, and engagement can be taught” (Madden, Green, & Grant, 2011, p. 73). Many researchers in creativity believe it can also be taught (Baer & Garrett, 2010; Robinson, 2011; Sawyer, 2010; Skiba, Tan, Sternberg, & Grigorenko, 2010; Starko, 2010; Torrance, 1970).

If creativity involves solving problems, then young people need background knowledge to assist them (Starko, 2010). According to Starko, two categories of information are important to share with youth: 1) understanding concepts, generalizations, and big ideas of the domain in order to ask questions; and 2) learn the techniques and habits of mind of creative people in the domain (Starko, 2010). Unlike coaching adults, who have background experience and knowledge to draw from, coaching youth often involves teaching and mentoring.

Other important information to share with young people is the differences in questions. Questions checking for understanding or clarification are different from questions related to creativity, such as wonderings. Wonderings or curiosity questions do not have readily apparent answers and encourage youth to ask beyond what they know (Starko, 2010).

Beth Hennessey and her colleagues studied the “immunization effect” on school-age children in regards to extrinsic motivation (2010a). The premise of the study was to see if it were possible to “immunize” children to the effects of extrinsic motivators by strengthening intrinsic motivation and to provide techniques for countering the negative effects of extrinsic motivation. Students were trained through videos on ways to make routine assignments more exciting and interesting and on how to distance themselves from rewards. Their studies showed that while they could not expect children exposed to their training to demonstrate unusually high levels of creativity, they could expect students to maintain baseline levels of intrinsic motivation and creativity under conditions of extrinsic rewards (Hennessey, 2010a).

Youth do not have the background knowledge and experience that adults do. Coaching students in exploring information and gaining basic knowledge will assist them in developing and strengthening their personal creativity.

Barriers to creativity

Dweck proposes that students develop beliefs about their abilities and these become mindsets. A fixed mindset is a belief that an ability cannot be changed; it is fixed. A growth mindset reflects a belief that one can improve one’s abilities with effort. She elaborates on the two mindsets:

Students with a fixed mindset are overly concerned with how intelligent they are. They prefer to shine without having to work hard, and they become discouraged or defensive when they encounter difficulty – these are the very characteristics that prevent people from fulfilling their potential. . . . However, students with a growth mindset consistently try to stretch themselves beyond their comfort zone

to learn new things. They are willing to work hard and are resilient in the face of setbacks – the very qualities that predict the flourishing of ability over time (see Bloom, 1985; Dweck, 2006; Ericsson, 2003; Weisberg, 1999). This work suggests that for children to truly blossom, we need to convey the values and practices of the growth mindset. And when we do, many more children may become gifted over time than we ever imagined. (Dweck, 2012, p. 16)

Subsequent studies and research with students revealed that when praised for their intelligence, students lost confidence in their abilities over time. The reasoning is that they believed if they were truly intelligent, then they would not encounter difficulties, in other words, it should be easy. Dweck also expressed concerns with students focusing on their strengths, which could lead to a similar belief of once having identified a strength, they should not have to work as hard utilizing that strength. She suggests rather than offering praise for an ability, adults should praise students for effort. In a study of seventh grade students with declining grades, researchers found those students who were taught how the brain works and about the mindsets were more successful in bringing their grades up than those just taught study skills (Dweck, 2012). Coaching youth in understanding the mindsets, identifying and examining the beliefs they hold, and focusing instead on the process and enjoyment of learning, assists youth in acquiring the mindsets necessary for developing personal creativity.

Aronson and Juarez, in studies with students, found that academic performance was affected in situations where students were being evaluated and a negative cultural stereotype of their group's intellectual capacity was relevant. For example, a negative cultural stereotype of black students is that they are depicted as not being as intelligent as

white students. When two groups of black students were given a test, one was told it was to measure intelligence and the other group was told the test was non-evaluative and for research purposes only. The group that thought the test was a measure of intelligence scored significantly lower than the other group. The same phenomenon was demonstrated with young women in math and the sciences (Aronson & Juarez, 2012). Coaches can work with young clients by sharing this knowledge with them, identifying if they are at risk for stereotype threat, and then coaching them in overcoming it.

Catherine Good's research focused on how a sense of belonging to a particular domain can affect an individual's motivation to stay in the domain. This is particularly relevant for women in the fields of math and science. Her research found that stereotyped individuals "may be less interested in and willing to pursue a domain of study in which their sense of belonging has been undermined despite their high achievement" (Good, 2012, p. 42). When students in her study were mentored in the idea of intelligence being malleable rather than a person having fixed abilities (fixed mindset), the impact of stereotype threat was lessened (Good, 2012, p. 47). Good also found in related studies that students possessing a fixed mindset were most interested in feedback letting them know if they were right or wrong, but less interested in feedback that they could learn from. Coaching can uncover these underlying barriers to creativity. Coaches can then work with young people to help them reframe their beliefs in this area.

Groupthink is a term coined by Irving Janis (1982) and refers to a mode of thinking people engage in when members of a cohesive group where decisions are based on maintaining unanimity. "Groupthink refers to a deterioration of mental efficiency, reality testing, and moral judgment that results from in-group pressures" (Janis, 1982, p.

9). Janis studied foreign policy decision making to illustrate his theory of groupthink, but acknowledges groupthink is a phenomenon that can take place in any group where concurrence seeking is a strong motivator.

Janis makes several generalizations about who is susceptible to groupthink (1982). He suggests that psychological research indicates that people who are fearful of disapproval and rejection and prefer to work in groups of friends are more at risk for groupthink.

Concurrence-seeking and the various symptoms of groupthink to which it gives rise might be best understood as a mutual effort among the members of a group to maintain emotional equanimity in the face of external and internal sources of stress arising when they share responsibility for making vital decisions that pose threats of failure, social disapproval, and self-disapproval. (Janis, 1982, p. 256)

Studies show one of the stages in adolescent development is a period of time when youth are influenced by peer pressure and try to conform and fit in (Claxton & Pannells, 2005; Lau & Cheung, 2010; Starko, 2010). Peer pressure is a form of groupthink.

Janis offers three suggestions for thwarting groupthink: 1) the group leader encourages and assigns each member to be a critical evaluator and voice his or her doubts and objections, 2) the group leader maintains an impartial and unbiased stance at the outset, making sure many alternatives to issues are considered, and 3) that if possible, more than one group considers solutions and alternatives to the same problems and issues. He offers other suggestions, such as one person in the group is assigned the role of devil's advocate, outside experts are brought in to challenge the group thinking, and

members are encouraged to discuss the issues in their respective circle of colleagues and report back to the group as a whole (1982).

Paul Kowert (2002) asserts that the groupthink theory is difficult to measure and prove. He suggests that the negative consequences of groupthink occur when learning is shut down. When a group maintains an attitude of openness to learning, poor decisions based on group pressures are less likely to occur.

Marlene Turner and Anthony Pratkanis (1998) conducted a study of the groupthink model over a 25-year period. They assert that the groupthink theory is far-reaching across many disciplines in the social sciences yet very few empirical studies have been conducted. They suggest it is difficult to measure due to the number of dependent and independent variables and due to the ambiguity of its theoretical specifications. "It is ironic that the concurrence-seeking that Janis so warned against may have played a role in the widespread acceptance of the groupthink despite the lack of a solid body of empirical evidence supporting it" (Turner & Pratkanis, 1998, p. 112).

James Esser (1998) also conducted a 25-year review of case studies and laboratory findings on groupthink. He concluded that the research did not support the theory that group cohesiveness or esprit de corps was a strong predictor of groupthink. He did find, however, that faulty structure and procedures of the group were linked to groupthink; in particular insulation, promotional leadership, and homogeneity were strong predictors.

According to John Wakefield, there is research that suggests that creative individuals have a strong inclination to tear themselves free from the norm, to distinguish themselves as unique (Wakefield, 1992). He cites studies from Pepinsky and Torrance

that suggest that creative individuals develop strategies for relating and reacting to the norm group without compromising their uniqueness.

Everyday creativity

Many people believe creativity is largely about the arts, that only a few people can be considered truly creative, and creativity is largely demonstrated at the eminence level (Csikszentmihalyi, 1996; Kaufman & Beghetto, 2009; Richards, 2010b; Robinson, 2011). Everyday creativity is considered universal to all humans, is central to our survival and greatly enhances our enjoyment of life's experiences (Richards, 2010b; Csikszentmihalyi, 1996).

Even though personal creativity may not lead to fame and fortune, it can do something that from the individual's point of view is even more important: make day-to-day experiences more vivid, more enjoyable, more rewarding. When we live creatively, boredom is banished and every moment holds the promise of a fresh discovery. (Csikszentmihalyi, 1996, p. 324)

In addition, promoting little-c (everyday creativity) with young people can lead to eminence in the future (Richards, 2010a.)

Enhancing young people's knowledge about creativity, in particular, Kaufman and Beghetto's Four P model of creativity, *Big C*, *Pro-c*, *little-c*, and *mini-c* (Kaufman & Beghetto, 2009), will help them understand the processes, development, and benefits of creativity.

Ruth Richards offers several suggestions for enhancing everyday creativity:

- Encourage young people to observe actively or be mindful of what they are doing and be brave enough to ask questions.

- Downplay competitiveness and promote acceptance of individual uniqueness—it is okay to be a little weird, a little offbeat.
- Cultivate an appreciation for creativity in general and the creativeness of peers in particular.
- Focus on the joy or positive emotions associated with opening to creative possibilities (Richards, 2010a).

Our everyday creativity is our birthright, survival capacity, and much more. It can bring joy to others, and to us. We can use our creativity for numerous purposes and do some helping along the way. More and more interesting, one finds once again advantages for personal health, in giving to something greater than oneself. (Richards, 2010a, p. 228)

Strategies for Coaching Personal Creativity

Coaching youth to develop attitudes of openness and resilience will contribute to expanding their creative potential as well as help them persevere in times of adversity.

The first task in teaching for creativity in any field is to encourage people to believe in their creative potential and to nurture the confidence to try. Other attitudes important for creative learning include: high motivation and independence of judgment; a willingness to take risks and be enterprising, to be persistent and to be resilient in the face of false starts, wrong turns and dead ends. (Robinson, 2011, p. 269)

Researchers in positive psychology, a new branch of psychology focused on the notion that people are healthy, resourceful and willing to grow, (Biswas-Diener & Dean,

2007) maintain that resilience can be taught and learned (Seligman et al., 2009). Ann Masten and Marie-Gabrielle Reed define resilience as “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk” (Masten & Reed, 2005, p. 75). Research on resilience indicates that resilience emerges from ordinary rather than extraordinary processes (Masten & Reed, 2005).

The research team at the University of Pennsylvania’s Positive Psychology Center has designed the Penn Resiliency Program (PRP), a curriculum for teaching resiliency to late elementary and middle school age children. Resilience concepts and skills are practiced in a variety of ways. Results indicate that the lessons taught prevent depression and anxiety in children. (Gillham & Reivich, 2007).

Coaching young people in resilience can begin with exploring what resilience looks like, under what circumstances they demonstrate or practice resilience (self-awareness), and what mindsets or attitudes they need to change or cultivate to develop resilience.

Openness has been linked with creativity (Csikszentmihalyi, 1996; Feist, 1998; Richards, 2010b; Russ & Fiorelli, 2010). Coaches can work with youth to cultivate an attitude of openness to different experiences, ideas, and perspectives that will help them open doors to their creative potential.

Closely related to openness is curiosity. Csikszentmihalyi advocates focusing on surprise as a way to develop openness. He suggests trying to be surprised by something every day, trying to surprise someone every day, and when a spark of interest in something is ignited, pursue it (Csikszentmihalyi, 1996).

Several cognitive processes have been linked to creativity and provide opportunities for coaching; problem finding, problem solving, divergent thinking, and the uses of metaphors and analogies.

Problem finding is an important part of the creative process and is distinct from problem solving. Researchers have studied problem finding in highly creative people to determine the processes by which they discover and select problems to be solved (Kolzbelt, et al., 2010).

Ward and Kolomyts suggest problem formulation or problem finding are creative processes used in real-world settings where tasks are ill defined: “doing something creative often requires people to construct, formulate, or otherwise define the problem or task to be accomplished, to retrieve from memory or seek out relevant information, and to generate and evaluate potential courses of action” (Ward & Kolomyts, 2010, p. 106).

Alane Starko’s contention is that our current education system does not encourage students to question, but rather to answer questions (Starko, 2010). Problem finding stems from wonderings and questions and can be cultivated in young people. Starko suggests using the questions of *who*, *what*, *when*, *why*, and *how* to stimulate creative problem finding (Starko, 2010).

Csikszentmihalyi recommends, “stop yourself when you sense you have a problem and give it the best shot at a formulation” (Csikszentmihalyi, 1996, p. 344).

John Wakefield explored problem-solving skills in the arts. He discussed the work of Getzels and Csikszentmihalyi that found a correlation between an artist’s success and his or her ability to problem find. A similar study was done on middle school students comparing high-creative students to low-creative students. The results showed

significant differences between the two groups on two out of three problem-finding variables (Wakefield, 1992). Wakefield defines creative thinking as, “a meaningful response to any situation which calls for finding a problem and solving it in one’s own way” (Wakefield, 1992, p. 13).

The Creative Problem Solving model (CPS) is a theory explaining the problem solving process. The model alternates between creative thoughts (divergent thinking) and convergent thoughts (critical thinking). In the creative phase, many ideas are generated, and in the convergent phase, only the best ideas are selected for further exploration. Between each creative phase is a convergent phase that narrows until a solution is selected. The model is structured linearly, but it is acknowledged the process does not always adhere to a linear path (Fairweather & Cramond, 2010). The process starts with mess finding, followed by fact-finding, problem finding, idea finding, solution finding, and ending with acceptance finding (Fairweather & Cramond, 2010, p. 121).

Donald Treffinger and Scott Isaksen researched the history and evolution of the CPS model since its inception 50 years ago. They contend that the model has changed over the years to be more natural, flexible, and dynamic (2005). The framework has become more efficient in the problem-solving process because the emphasis is on allowing problem solvers to select and use methods and tools more appropriate to their task. The newer framework also takes into consideration the preferred styles of the problem solvers, context, or environment in which the model is applied, and the group dynamics (Treffinger & Isaksen, 2005).

The contemporary approach to teaching and applying CPS in programming for talent development involves a rich tapestry of cognitive skills and tools, personal

characteristics and styles, a supportive environment, attention to outcomes that extend beyond recognition and recall, and opportunities to work on real-life problems and challenges. (Treffinger & Isaksen, 2005, p. 350)

John Wakefield (1992) studied youth's creative cognition in the arts at varying ages, from middle school to college. He found problem-solving skills were emerging in 14-year-olds and that their divergent thinking skills were higher than other less creative students. Wakefield studied cognitive skills associated with creativity in twelfth graders and found that arts-oriented twelfth graders were significantly more insightful than other students. Another significant finding was that "these results signify that achievements in art and literature are no less strongly associated with logic, divergent thinking, and creative thinking than are achievements in what are commonly considered the more rigorous disciplines of math and science" (Wakefield, 1992, p. 60). He offers as a conclusion that logic, divergent thinking, and problem finding are fairly well-established in twelfth-grade arts-oriented students.

Coaching young people to intentionally formulate problems and come up with solutions to real world issues, to question and wonder, and to brainstorm, are strategies for building the cognitive skills linked to personal creativity. Coaching youth in these areas helps young people develop, enjoy, and practice skills that assist them in living creatively.

Divergent thinking is considered one of the primary indicators of creativity (Runco, 2010; Russ & Fiorelli, 2010). John Baer and Tracey Garrett suggest the most widely used technique for teaching divergent thinking to students is brainstorming (2010). According to Baer and Garrett, the rules to brainstorming are:

Defer judgment: Come up with as many unusual and original ideas as possible, deferring judgment until later. Making judgments too soon means people will take fewer risks in coming up with ideas.

Avoid ownership of ideas: When people feel an idea is “theirs,” they are more likely to become defensive later when ideas are critiqued and less likely to have their ideas modified.

Build on other ideas: It’s ok to modify, build on, or borrow from other ideas.

Encourage wild ideas: Impossible or unworkable ideas may spur someone to think of one that is more possible or more workable (Baer & Garrett, 2010).

Alane Starko uses an approach from the Talents Unlimited model (a model to promote creativity in public schools) called productive thinking (Starko, 2010). Young people are encouraged to think of many ideas (fluency), think of varied ideas (flexibility), think of unusual ideas (originality), and add to their ideas to make them better (elaboration). She advocates for using these ideas in meaningful ways with young people. Brainstorming for the sake of brainstorming does not promote creativity; brainstorming to come up with solutions to real world problems or issues and how to choose from those ideas stimulates more creative thinking (Starko, 2010, p. 129). Thus, coaching young people on how to develop the *attitudes* of creative thinking such as openness, deferring judgment, evaluating ideas, and building on ideas is just as important as coaching them in the generation of ideas or brainstorming and can be used in coaching them through real life problems or issues and in goal attainment.

Robert Schirrmacher suggests using prompts to encourage creative thinking (1988). I have adapted his list to fit a coaching model of questioning.

Asking *What would happen if.....*, questions; what would happen if you believed you were capable of creating? What would happen if you did have more time?

Ask young people to think of multiple uses for an item

Just suppose—use this to stimulate thinking from different perspectives; just suppose you could fly, where would you go? Just suppose you had all the money you wanted, what would you do?

Ask *How many different ways*—can you earn money? Can you surprise your mother? Can you be happy? Can you be creative?

Use descriptive phrases —have the young person describe a situation, object, or feeling in as many different words as possible

Ask *How many different ways could this be made better?*

Ask *What would.....if.....* questions; What would it look like if....., What would be more funny if....., What would it taste like, feel like, appear like, sound like.....etc. if.....?

Alane Starko (2010) suggests improving divergent thinking by using idea-generating queries in the form of an acronym, SCAMPER, which was developed by Robert F. Eberle. The acronym and the queries it represents are shown below:

S = substitute. What other materials, ingredients, or components could I use instead?

C = combine. How can I combine parts or ideas?

A = adapt. How can we change or imitate something else? What else is like this?

M = modify, minify, or magnify. How can I modify this? How can it be made smaller, more compact, or lighter? How can it be exaggerated, larger, or stronger?

P = put to other uses. How can this be used in a new way?

E = eliminate. What can be omitted or deleted?

R = rearrange or reverse. How can I rearrange the parts, turn it around, do the opposite? (Starko, 2010, p. 133–136)

Ward and Kolomyts' research showed a link between creative processes and analogies. The use of analogies is a way to explain the novel by using the familiar. Analogies can also be used to transfer knowledge from one domain to another, as well as in the processes of problem solving (Ward & Kolomyts, 2010).

Karen Meador, Anne Fishkin, and Murrell Hoover cite Charles Schafer in their studies as saying that the ability to think metaphorically or analogically has traditionally been considered a hallmark of creative genius. They suggest that comparisons between seemingly unrelated ideas or objects often result in fresh ideas or perspectives (1999). Meador et al., discuss two different types of analogies: making the strange familiar and making the familiar strange. Making the familiar strange is used when trying to think about familiar things in a new way; making the strange familiar helps in assimilating new information because it draws on prior experiences to facilitate understanding (1999). An example of making the familiar strange would be to think of a school as a restaurant with the purpose of redefining the culture of a school or the relationships of the stakeholders in education. Who are the “servers” in a school? What roles do servers have? An example

of making the strange familiar would be to think of a black hole in space as a powerful vacuum cleaner, pulling debris toward it.

E. Paul Torrance developed a hierarchy of six creative skills to be taught to children. Analogies are taught at level five and begin with a playful attitude towards analogical reasoning (1970). He suggests four types of analogies children can play with:

(1) *Personal analogy*, personal identification with the elements of a problem, expressing it in the language most familiar to the child; (2) *direct analogy*, describing the actual comparison of parallel facts, knowledge, or technology, such as between the telephone and the human ear; (3) *symbolic analogy*, using objects and impersonal images to describe the problem; and (4) *fantasy analogy*, creating fantasies, magical solutions, and then bringing them down to earth. (1970, p. 47)

Jonathon Hey, Julie Linsey, Alice M. Agogino, and Kristin L. Wood (2008) researched how analogies and metaphors are used in the creative design process of engineers. They found that metaphors are predominantly used for early problem-framing design phases (helpful in understanding the issue) and that analogy is the dominant tool used for concept generation (useful in mapping the causal structure between a source idea in one domain to the target design problem). They go on to recommend that the use of analogy be promoted and practiced as a skill for graduating engineering designers (Hey et al., 2008).

Coaching young people to think in analogies and metaphors promotes creative thinking, assists in problem finding and problem solving, and is useful for careers in innovation and design.

Barbara Eversole explored the use of metaphors in coaching. In her work, she studied Max Black's interactive theory of metaphor that suggests that metaphors are creative because they create a connection or similarity that did not exist before (2003). Eversole found that coaches use metaphors for helping clients understand abstract concepts in terms of concrete experiences, in reframing (changing perspectives), in creating shared meaning and short-cuts to understanding, and to represent the client's self-concept. "Metaphor was used whenever the client was stuck, seemed to need more clarification, or needed help in understanding what she was feeling or had experienced, illustrating how metaphors can be extremely powerful in coaching discourse" (Eversole, 2003, p. 93).

Three useful resources for coaches interested in coaching for personal creativity with youth are Julia Cameron's *The Artist's Way* and *The Artist's Way for Parents* and Edward de Bono's *Six Thinking Hats*. Cameron's first book, *The Artist's Way* is based on the premise that creativity is a spiritual matter and that we are all creative. It is essentially a 12-week self-coaching process to unblock creativity. The process has two basic tools, morning journaling and weekly activities that inspire creativity (Cameron, 1992). Cameron describes *The Artist's Way for Parents* as a toolkit for parents to use to encourage and guide their children in developing their creative potential. Parents engage in morning journaling, taking their children out to enjoy creative activities, and sharing the experiences as a daily bedtime ritual (Cameron, 2013).

De Bono's *Six Thinking Hats* is useful for working with youth in groups. Although geared for adults in a business setting, it can easily be adapted to work with young people working in teams. The premise is that there are six functional roles, each

represented by a different colored hat. By mentally switching roles, individuals change perspectives leading to more creative ideas (de Bono, 1985).

Goal Setting and Goal Attainment

Anthony Grant (2012) suggests that coaching is about helping people direct their resources in order to create positive change in their lives or business. He posits that all coaching conversations then, are either explicitly or implicitly goal-focused. Biswas-Diener and Dean (2007) state all goals—occupational, material, relational, or personal, are natural motivators for life and that many researchers in positive psychology have made a connection between goal pursuit and happiness.

Many coaches use the acronym SMART when working on goal attainment with their clients (Biswas-Diener & Dean, 2007; Skiffington & Zeus, 2005; Whitmore, 1997; Whitworth et al., 1998). The acronym stands for specific, measurable, attainable, relevant, and timelined.

Grant argues that a more broad approach to goal setting is needed in coaching. He suggests that using the SMART acronym can “dumb down” coaching. He argues that while the ideas represented in the acronym are supported by goal theory and are useful in some instances, the use of the acronym has inhibited the development of a more sophisticated understanding and use of goal theory in the coaching community (Grant, 2012).

Grant (2012) suggests that there are three domains relevant to coaching in the goal construct: cognitions, behavior, and affect. “These three domains are of great relevance for coaching, and an understanding of goals for use in coaching should encompass all three domains” (Grant, 2012, p. 148).

Kenneth Sheldon and Andrew Elliott (1998) examined the reasons behind setting goals and the correlations with goal attainment. They found that goals based on intrinsic motivation (pursuing goals that are perceived as enjoyable and interesting) and identified motivation (pursuing goals based on one's values and beliefs or personal convictions) were more likely to yield the sustained effort necessary for goal attainment. In contrast, goals set with extrinsic motivation (external rewards) and/or "introjected" motivation (goals pursued out of guilt or through the coercion of one's own internal processes) are less likely to inspire the effort needed to overcome the challenges and obstacles inherent in goal attainment (Sheldon & Elliott, 1998).

Beth Hennessey (2010a) worked with students, ages seven to eleven years old, to find out if students could be immunized to the negative effects of extrinsic motivation. In three separate studies, she and her colleagues showed tapes depicting students focusing on the intrinsic values of tasks and having discussions with their teachers on intrinsic motivation. They then were assigned a task with an extrinsic reward and compared with a control group. The results from all three studies were that the creativity of children who received intrinsic motivation training and expected a reward was higher than that of any other control group (Hennessey, 2010a).

The implications for coaching youth in goal setting would be for the coach to assist them in evaluating the motivations for setting their goals and to focus on the intrinsic rewards of performing goal attainment tasks.

Self-regulation is important in goal setting. Grant encourages action planning as a process helpful for people with low self-regulatory skills.

The coach's role here is to develop the coachee's ability to create a realistic and workable plan of action and to help them define task strategies that will facilitate the goal striving process, whilst promoting persistence in the face of adversity – in this way clients can enhance their self-regulation abilities and build resilience.

(Grant, 2012, p. 159)

Based on my experience in working with youth, many adolescents have no experience with a goal-setting process, therefore coaching young people in understanding and developing their skills in goal setting is important in developing their personal creativity.

Grant suggests creating goals that generate constructive feedback. Useful feedback provides information that leads to modification of current goals or leads to subsequent goals. Constructive feedback, if done correctly, results in successful goal attainment (Grant, 2012).

Gabriele Oettingen, Gaby Honig, and Peter Gollwitzer (2000) studied the self-regulatory processes of goal attainment in children and adolescents ages 8 to 12 years old. They found that children move from naïve optimism to forming strong commitments to goals when assisted in contrasting their fantasies with what impedes them in the present. “Strong goal commitments emerge when individuals mentally contrast their fantasies about a desired future with negative aspects of impeding reality and chances of success are perceived as high” (Oettingen et al., 2000, p. 718). They go on to suggest that children that have lost their naïve optimism can still benefit by indulging in fantasies as it leads to moderate goal commitment even with low expectations of success (Oettingen et al., 2000).

Goal commitment is just the first step in goal attainment. According to Oettingen, et al., intentions for implementation of a goal are a powerful self-regulatory tool (Oettingen et al., 2000). “It has been observed that difficult to reach goals benefit greatly from being furnished with implementation intentions” (Oettingen et al., 2000, p. 722). Implementation intentions specify that an individual commit to performing a certain action in a certain time and place in order to get started on a goal. In a separate study, Oettingen et al. found that having college students consider possible barriers and obstacles to getting started on a goal and then setting intentions (if-then situational cues) resulted in more successful attainment of their goal (2000). The implications for coaching are to work with youth to identify barriers to attaining their goals, and then have them specify their intentions for implementing their goals.

Williams and Thomas (2005) encourage coaches to have their clients write down their goals, citing a study of Harvard Business School students and their success in achieving their goals. The study found only 10% of freshman went on to succeed in their goals, but included in that 10% were 100% of the students who had their goals written down.

Biswas-Diener and Dean (2007) suggest it is natural and perhaps helpful for clients to experience anxiety and stress around goals. They suggest that the more people invest in their goals, the more likely they will succeed and the more people consciously consider failing at their goals, the more anxiety and stress they will feel. They also caution coaches in not unwittingly increasing the anxiety around the coachee’s goal setting and attainment by becoming aware of their own personal biases and prejudices.

John Goddard is cited as an example of someone who demonstrates the power of goal setting and achieving (Canfield & Switzer, 2005, Williams & Thomas, 2005). Goddard set 127 goals when he was 15 and spent a lifetime working to achieve them. He attained most of them during his lifetime and was considered a real-life Indiana Jones because of the adventurous life he lived (Goddard, 2013). I have found reading a news article about John Goddard's life with my students and allowing them to explore his website inspires them to set more stretch goals.

CHAPTER 4

METHODOLOGY

On July 18th, 2013, I sent out a request through the ICF *request for proposal* website (ICF, 2013c). The request went out to all ICF members asking for a response from coaches who were either coaching youth or coaching for creativity or both. I requested an interview either through email or over the phone for the purpose of gathering information for my dissertation. The results were that out of a dozen coaches who responded, only 4 were currently coaching young people or were coaching for creativity. Out of those 4, only 1 had a significant number of youth in her practice and was coaching for personal creativity. Even so, coaching for personal creativity was not the focus of her coaching. A copy of the interview questions is included in the Appendix.

I did an extensive review of the literature on the nature of creativity: the definitions, indicators of creativity, personality and characteristics of creative people, and the development and barriers to creativity with a focus on youth. Several journals and handbooks on creativity provided a rich resource for research and references. I also explored the literature on coaching and youth coaching using resources from the coaching symposiums, coaching association websites, and books on coaching. From this research, I developed a three-tiered model for coaching youth in strengthening their personal creativity.

CHAPTER 5
RESULTS,
SUMMARY AND RECOMMENDATIONS

Businesses, government, and organizations of all kind are calling for employees that are creative and innovative, capable of problem solving with creative thinking and solutions. There is growing concern with recent evidence that creativity in school-age children is decreasing and that in fact, the education system appears to stifle creativity.

In my research, I found very few coaches working primarily with youth and not any coaches working with youth in personal creativity. From my research, I concluded that coaching for personal creativity is an area not sufficiently being addressed by the coaching community. My conclusions are based on sending out a *Request for Proposal* (RFP) to the largest coaching association, the International Federation of Coaches (IFC), requesting interviews with coaches either working with youth or working in areas of creativity.

The very nature of coaching, by providing a safe, nonjudgmental experience, positively lends itself to coaching youth for personal creativity. In this dissertation, I have proposed a model, *Coaching Youth to Strengthen Personal Creativity*, to assist coaches working with youth in narrowing the gap between the need for greater creativity in the workplace and the lack of creativity development in the education system. The

model is three-tiered with the foundational tier of Self-Awareness. Many coaches have identified self-awareness as the key to transformation and change. It is particularly important for youth to identify their passions, interests, strengths, and creative impulses in order to help position them in their pursuit of life goals. Researchers have determined that it takes at least 10 years of working in a domain to attain eminence in the field; helping youth attain the self-awareness on their own personal creativity will facilitate the journey to eminence. The second tier of the model is Knowledge. Youth typically have gaps in their knowledge and background experiences. Coaching young people in understanding creativity, the barriers to creativity, goal setting, and attainment, assists them in developing their own personal creativity. The third tier offers strategies for coaches to assist youth in developing their own personal creativity.

Recommendations

More research is needed to evaluate the following questions:

- What is the effectiveness of coaching youth for personal creativity?
- What assessments are best used for measuring personal creativity in youth?
- What are the circumstances and conditions ideal for coaching youth in strengthening personal creativity?
- What certifications, background experience, and/or training in adolescent development should coaches have in order to work with youth in this area?
- Longitudinal studies of the effects of coaching youth to strengthen personal creativity—does coaching youth in personal creativity lead to greater life satisfaction and well-being?

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APPENDIX

Copy of Interview Questions

INTERVIEW QUESTIONS JULY 2013

LINDA HOPPER, DISSERTATION ON COACHING YOUTH IN PERSONAL CREATIVITY

Please answer the following questions in as much detail as possible. If the question does not apply to you, please write N/A. Thank you!

Your Name: _____

Name of your business: _____

Years coaching: _____

Phone: _____ Email: _____

Coaching Youth:

1. On average, how many youth (ages 12-20) do you have in your coaching practice?
2. What areas do you specialize in when working with youth? (health, life-coaching, career choice, academic achievement, etc.)
3. In what ways is your coaching different with youth than when you coach adults?
4. What specific strategies have you found to be most effective when coaching youth?

5. Have you coached young people specifically in the issue of “creativity”? If so, what specific strategies do you use?
6. What criteria do you use to evaluate the effectiveness of your coaching creativity in young people?
7. Do you consider yourself and/or your coaching to be “creative,” thereby able to coach from a position of authenticity? Please explain.
8. In your opinion, what are some of the greatest challenges in coaching youth?

Coaching Creatives:

1. On average, how many people do you coach in creativity?
2. In what areas do your clients ask for coaching in creativity? (to enhance performance on the job, to create a product, to become more creative in general, etc.)
3. What challenges have you encountered in coaching for creativity?
4. What strategies have you used that are most effective in coaching for creativity?
5. What criteria do you use for measuring your effectiveness in coaching creativity?

Please feel free to add any additional information or comments in this area. Thank you for your help

BIOGRAPHICAL SKETCH

Linda L. Hopper's second career is as a licensed teacher in the public school system. She holds two Master's degrees, in International Management from Thunderbird School of Global Management and Master of Arts in Teaching from Greenville College, and is a candidate for a PhD in Professional Coaching and Human Development from the International University for Professional Studies. She completed coursework from the Graduate School of Coaching (Coachville) and had a successful coaching practice for several years after working as a corporate lender for a major regional bank. Her dissertation is a merging of her two passions, coaching and education, and presents a three-tiered model: "Coaching Youth to Strengthen Personal Creativity." Contact Linda at lltarr@studentmindset.com.