

Essentials

of Creativity

Assessment

James C. Kaufman

Jonathan A. Plucker

John Baer



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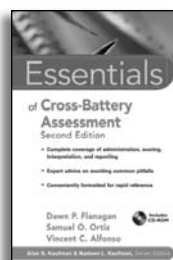
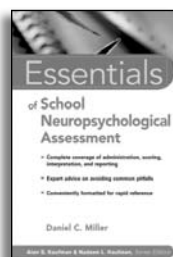
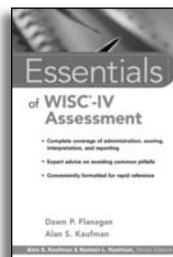
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*To my best friend since high school, my best man,
and like me, a baseball fan despite it all:*

Nate Stone.—JK

*To my wife, Kathleen, for all of her support,
understanding, and friendship.—JP*

For Sylvia.—JB

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SERIES PREFACE

In the *Essentials of Psychological Assessment* series, we have attempted to provide the reader with books that will deliver key practical information in the most efficient and accessible style. The series features instruments in a variety of domains, such as cognition, personality, education, and neuropsychology. For the experienced clinician, books in the series will offer a concise yet thorough way to master utilization of the continuously evolving supply of new and revised instruments, as well as a convenient method for keeping up to date on the tried-and-true measures. The novice will find here a prioritized assembly of all the information and techniques that must be at one's fingertips to begin the complicated process of individual psychological diagnosis.

Wherever feasible, visual shortcuts to highlight key points are utilized alongside systematic, step-by-step guidelines. Chapters are focused and succinct. Topics are targeted for an easy understanding of the essentials of administration, scoring, interpretation, and clinical application. Theory and research are continually woven into the fabric of each book, but always to enhance clinical inference, never to sidetrack or overwhelm. We have long been advocates of what has been called *intelligent testing*—the notion that a profile of test scores is meaningless unless it is brought to life by the clinical observations and astute detective work of knowledgeable examiners. Test profiles must be used to make a difference in the child's or adult's life, or why bother to test? We want this series to help our readers become the best intelligent testers they can be.

In *Essentials of Creativity Assessment*, Drs. James C. Kaufman, Jonathan A. Plucker, and John Baer cover the wide field of creativity assessment. These three international leaders in the field outline the major ideas in creativity research and both discuss and evaluate common creativity measures such as divergent thinking tests, the consensual technique, peer/teacher assessment, and self-assessment. They link creativity, intelligence, and giftedness in an insightful manner, and they present a list of take-home points to remember on the diverse topics covered in this cutting-edge book.

Alan S. Kaufman, PhD, and Nadeen L. Kaufman, EdD, Series Editors
Yale University School of Medicine

Essentials of Creativity Assessment

INTRODUCTION TO CREATIVITY

What does it mean to be creative? Some might say thinking outside the box; others might argue it's having a good imagination, and still others might suggest creativity is a synergy that can be tapped through brainstorming. We take an empirical, psychological approach to this question. One of the first things we want to do is to define what we believe creativity is.

We are starting off with a definition for creativity because so many studies on creativity do *not* define the construct. Plucker, Beghetto, and Dow (2004) selected 90 different articles that either appeared in the two top creativity journals or articles in a different peer-reviewed journal with the word “creativity” in the title. Of these papers, only 38 percent explicitly defined what creativity was. For the purpose of this book, we will use the definition proposed by Plucker et al. (2004):

“Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context” (p. 90).

Through this book, we may refer to a creative person, the creative process, a creative environment, or a creative product. We will discuss in this book how a product is determined to be new and/or useful and appropriate, who are the best judges, and what ratings may stand the test of time. We will also discuss ways of identifying creative people, either for guidance or admission to a program or school.

DON'T FORGET

Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context.

As we will discuss, creativity is a key component of human cognition that is related yet distinct from the construct of intelligence. A school psychologist who is presenting a complete perspective on an individual's abilities may wish to include creativity as part of this assessment.

However, it is often difficult to find or to decipher creativity assessments. They may seem like “pop” psychology, they may lack the standard psychometric information that is present in IQ tests, and they may require resources that a typical school psychologist may not possess (for example, access to five expert poets). We are writing this book to gather all as many resources as possible together so that you can make your own judgment about the best creativity assessments. There is no one perfect test for creativity, and we won't even always agree on the best possible measures. But we believe that after reading this book, you will be able to select a method for assessing creativity that best fits whatever situations, groups of people, and programs you may encounter.

A BRIEF OVERVIEW OF THE STUDY OF CREATIVITY

One way of organizing creativity research is the “Four P” model, which distinguishes the creative person, process, product, and press (i.e., environment) (Rhodes, 1961). We will use this model as a way of briefly highlighting theories and research that will be helpful background material in reading this book. We want to emphasize that this overview is just a highlight; there are numerous books devoted to the study of creativity. For recent books that give more detailed information about these ideas, we would recommend Piirto (2004), Runco (2006), Sawyer (2006), Simonton (2004), Sternberg (2003), and Weisberg (2006), as well

as edited volumes such as Dorfman, Locher, and Martindale (2006), Kaufman and Baer (2005, 2006), Kaufman and Sternberg (2006), Sternberg (1999a), and Sternberg, Grigorenko, and Singer (2004). We emphasize that we have only mentioned a handful out of many possible books, with a focus on recent works.

The Creative Person

Studies of the creative person may look at individual characteristics of the creator. These areas may include personality, motivation, intelligence, thinking styles, emotional intelligence, or knowledge (e.g., Baer & Kaufman, 2005; Sternberg & Lubart, 1995). Sternberg and Lubart (1995), in their Investment Theory, proposed that creative thinkers are like good investors—they buy low and sell high, or invest time and energy in currently unpopular ideas that have great potential for solving different types of problems. Investors do so in the world of finance, whereas creative people use ideas as currency.

Another theory that focuses on the creative person (and, as we will see later, also deals with creative environments) is Amabile's (1983, 1996) componential model of creativity. This theory proposed that three variables were needed for creativity to occur: domain-relevant skills, creativity-relevant skills, and task motivation. Domain-relevant skills include knowledge, technical skills, and specialized talents that individuals might possess that are important in particular domains, but not in others. If you're going to be a creative doctor, according to this theory, you would need to know medicine, but that medical knowledge might be of little use to someone who wanted to be a creative composer of music. Creativity-relevant skills are personal factors that are associated with creativity more generally, across many or all domains, such as tolerance for ambiguity, self-discipline, and a willingness to take appropriate risks. If one focuses on the individual person as possessor of such skills, the emphasis is on the person, but if one's focus is on the

underlying cognitive skill, then the emphasis is on the process itself rather than the person possessing it.

The third component in Amabile's model singles out one's motivation toward the task at hand. Intrinsic motivation—being driven by enjoyment of a task—is more associated with creativity than extrinsic motivation, or being driven by external rewards such as money or praise. A preference or need for a particular kind of motivation can be either domain-specific or domain-general. Someone might find learning and thinking about many different kinds of ideas very intrinsically motivating and need no outside reward to undertake such wide-ranging studies, or, on the other hand, someone might lack intrinsic motivation to do these things and might need extrinsic rewards to do any such studying. Either way, this would represent a very general intrinsic or extrinsic orientation toward motivation. But it is also common for someone to have a great deal of intrinsic motivation when it comes to some things, such as writing poetry, but it might require a great deal of extrinsic motivation in the form of rewards or anticipated evaluation

DON'T FORGET

Intrinsic motivation—doing something because it is interesting or inherently rewarding to do—is more associated with creativity than extrinsic motivation—doing something either to earn an external reward (such as money or praise) or because one is concerned about how one's work will be evaluated. A preference for a particular kind of motivation can be either domain-specific or domain-general.

to get that same person to think about doing something like a science project. It is also true that sometimes motivation can be thought of as something an individual possesses, whereas other times it's more the other way around: the environment (press) “possesses” the person, making either intrinsic or extrinsic motivation much more salient, at least temporarily.

Many of the methods described in the chapters of this book focus on the assessment

of the creativity of individuals. For example, there are various methods of self-assessment and assessment by others that emphasize how creative a person is, either generally or in particular domains. (See Rapid Reference 1.1.)

Rapid Reference 1.1

The Four P's of Creativity

Person
Process
Press (Environment)
Product

The Creative Process

The creative process is the actual experience of being creative. One popular conception is the idea of flow, or optimal experience, which refers to the sensations and feelings that come when an individual is intensely engaged in an activity (Csikszentmihalyi, 1996). One could experience flow in anything from rock climbing to playing the piano. An individual must feel like his or her abilities are a match for the potential challenges of the situation to enter the flow state. Early work on flow asked participants to wear electronic paging devices. The study participants were then beeped at random times (during the day, not at three in the morning) and asked to fill out forms that asked what they were doing and how they were feeling (Graef, Csikszentmihalyi, & Gianino, 1983; Larson & Csikszentmihalyi, 1983; Prescott, Csikszentmihalyi, & Graef, 1981). Later work revolved around interviews with acclaimed people, many known for being creative (Csikszentmihalyi, 1996; Perry, 1999).

Another way of considering the creative process is found in

DON'T FORGET

Flow is the experience of being intensely engaged in an activity. Someone could experience flow from a creative activity, such as playing the guitar or writing a computer program, or from a physical activity, such as rock climbing.

the Geneplore Model (Finke, Ward, & Smith, 1996). This framework has two phases—generative and exploratory. Generation, the “novel” part, is generating many different ideas in which a mental representation is formed of a possible creative solution. In the generative phase someone constructs a preinventive structure, or a mental representation of a possible creative solution. Exploration refers to evaluating these possible options and choosing the best one (or ones). There may be several cycles before a creative work is produced.

Many assessments focus on creativity-relevant skills or processes, such as the Torrance Tests of Creative Thinking and other measures of divergent thinking. The ability to find similarities among seemingly disparate words, as measured by the Remote Associates Test, is another example of a creativity assessment technique that focuses on processes. As with assessments of persons, assessments of skills or processes can look at creativity-relevant thinking skills more generally, or they can instead focus on skills that may be important only in particular domains. The most widely used divergent-thinking tests, for example, are the Torrance Tests of Creative Thinking, which assess divergent-thinking skill generally via two different versions, one verbal and the other figural.

The Creative Press

The third “P,” press, can refer to either home or work environment. Amabile (1996) has done many studies that consider the importance for creativity of intrinsic motivation, or being driven by a passion for the activity. People who enjoy the job at hand will generally also be more creative. Amabile and Gryskiewicz (1989) identify eight aspects of the work environment that stimulate creativity: adequate freedom, challenging work, appropriate resources, a supportive supervisor, diverse and communicative coworkers, recognition, a sense of cooperation, and an organization that supports creativity. They also list four aspects that restrain creativity: time pressure, too much evaluation, an