



## The Dispositions of Elementary School Children of Individualistic and Collectivist Cultures Who Are Intrinsically Motivated to Seek Information

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### Abstract

*This paper is based on two studies conducted in Colorado Springs, Colorado, in 2008 and in Kampala, Uganda, in 2014. The basic research question addressed in both studies was: “What are the experiences in the lives of upper elementary-aged children that foster an intrinsic motivation to seek information?” The secondary question was: “How do the experiences of students from a collectivist culture (Kampala, Uganda) who are intrinsically motivated to seek information compare and contrast with the experiences of similarly aged students from an individualistic culture (Colorado Springs, Colorado, U.S.A.)?” The focus of this paper is to explore the dispositions of both sets of informants using a theoretical framework consisting of the educative dispositions of an Effective Learner—independence, creativity, self-motivation, and resilience (Bertram and Pascal 2002)—as correlated with the dispositions listed in the American Association of School Librarians’ Standards for the 21st-Century Learner (2007). The findings were that both sets of informants exhibited an affinity for play and a tendency toward creativity, and that the Ugandan students were more inclined toward competence-building activities than their Colorado Springs counterparts, who generally exhibited noncompetitive dispositions. Furthermore, resilience was a disposition revealed by students in the Ugandan study.*

**Keywords:** effective learner, creativity, resilience, independence, self-motivation, intrinsic motivation, autonomy-supportive teaching, Self-Determination Theory, school librarianship, collectivist culture, individualistic culture, qualitative research

## Introduction

Much of the discussion about students in the United States today focuses on their test scores. This circumstance is not surprising because schools are under extreme pressure to produce students who do well on standardized tests. However, while these tests are intended to measure students' skills and knowledge, they are not intended to measure *dispositions*, attributes that also contribute to students' future success and happiness. In fact, the climate in schools that emphasize higher test scores tend to generate educational approaches based on external regulation and controlling social contexts. While these kinds of strategies may or may not be successful in raising test scores, they actually are "likely to sabotage a key goal of education—creating a flexible population of life-long learners who can adjust to the changing needs of society and the workplace" (Sheldon and Biddle 1998, 164). Instead, Pre-K–12 educators should be encouraged to implement strategies that will not only help students achieve academically but will also foster and promote positive dispositions toward learning.

## Dispositions

Merriam-Webster defines a disposition as "a tendency to act or think in a particular way" (2015). In the educational arena, the Innovation Lab Network defines positive dispositions as "mindsets (sometimes referred to as behaviors, capacities, or habits of mind) that are closely associated with success" (Council of Chief State School Officers (CCSSO) 2013, 5). Denise Da Ros-Voseles and Sally Fowler-Haughey have stated, "Dispositions are frequent and voluntary habits of thinking and doing" (2007, 1).

While the definition can generally be agreed upon, deciding which dispositions are desirable for Pre-K–12 students to possess is another matter. Based on an intersection of terms used in international definitions and skills frameworks, the Innovation Lab Network listed the following skills and dispositions as supported by current research to be strongly predictive of K–12 students' academic success: self-efficacy, initiative, integrity, intellectual curiosity, adaptability, study skills, time and goal management, collaboration, communication, and problem solving. In the same study, leadership, self-awareness, and self-control were found to be moderately predictive of K–12 student success (CCSSO 2013).

In the realm of the school library profession, Judi Moreillon and Kristin Fontichiaro listed keywords from the dispositions sections of American Association of School Librarians' (AASL's) *Standards for the 21st-Century Learner*: "initiative, investigating, confidence, self-direction, creativity, questioning, adaptability, emotional resilience, persistence, flexibility, productivity, leadership, teamwork, curiosity, motivation, openness, and critical stance" (2008, 65).

In whatever way dispositions are defined and listed, they are no doubt an integral part of an individual's ability to learn and grow. In fact, CCSSO has stated that the knowledge and skills students need to be successful "are not achieved in a vacuum but require the development of underlying dispositions or behavioral capacities" (2013).

## Background

This paper is based on studies conducted in Colorado Springs, Colorado, in 2008 (Crow 2011) and in Kampala, Uganda, in June 2014 (Crow 2015). The basic research question addressed in

both studies was: “What are the experiences in the lives of upper elementary-aged children that foster an intrinsic motivation to seek information?” The secondary question in the Ugandan study was: “How do the experiences of students from a collectivist culture (Kampala, Uganda) who are intrinsically motivated to seek information compare and contrast with the experiences of similarly aged students from an individualistic culture (Colorado Springs, Colorado, U.S.A.)?”

## Overview of Information-Seeking Behavior Findings

The findings relating to students’ information-seeking behavior of the two sets of informants, as seen through the lens of the Self-Determination Theory (SDT) (Deci and Ryan 1985), indicated that the dominant motivation pattern of the Kampalan students was the same as the students in the Colorado Springs study (high to low): Identified (action resulting from values), Intrinsic (action based on inherent pleasure or satisfaction), Introjected (action stemming from pride or shame avoidance), and Extrinsic (action to gain reward or to avoid punishment) (see Crow 2015).

As for the students’ information-seeking styles, there were fewer book readers in the Ugandan study (40 percent) compared with the Colorado Springs study (78 percent), no doubt reflecting the scarcity of printed material of all types in the homes of the Ugandan children in the study, though they did have access to a small library at school. Ugandan students were more apt to ask other people in their information-seeking quests (100 percent) than the students from Colorado Springs (34 percent), reflecting the collectivist and individualistic natures of the two sets of students’ cultures. Only 20 percent of the students in Uganda were television and movie watchers, compared with 78 percent in Colorado Springs. Part of the reason for this disparity is no doubt due to the unreliability of electricity in Uganda, as well as the very small number of televisions in the informants’ homes there. Both sets of informants showed the same preference for *non-assigned information-seeking experiences*, and none of the preferred information experiences from either group was *fully assigned* (Crow 2011, 2015).

Both the Kampalan and Coloradan students mentioned a variety of interests and information-seeking episodes related to those interests. Both groups showed more interest in academic topics (science, social studies, and math) than any other, but of the academic topics, the Kampalan students also showed an interest in English (a second language for this population). Science was the favorite academic topic of both informant groups. The interest in reflective topics varied greatly, with Coloradan students showing great interest in career-related topics and the Kampalan students reflecting more on death, fear of dogs, and abuse (Crow 2011, 2015).

In addition to the findings reported in previous articles, informants from both studies exhibited particular dispositions in both their information-seeking and other aspects of their living experiences. The purpose of this article is to explore the dispositions of both sets of informants.

## Theoretical and Conceptual Frameworks

### Introduction

The theoretical framework for the disposition analysis of the two studies consists of the four educative dispositions of an Effective Learner—independence, creativity, self-motivation, and resilience (Bertram and Pascal 2002)—as correlated with the dispositions listed in AASL’s *Standards for the 21st-Century Learner* (2007).

## Dispositions of an Effective Learner/21st-Century Learner

### Overview

Based on experience and research acquired through the Accounting Early for Life Long Learning Project, Tony Bertram and Christine Pascal outlined three elements of the effective learner: “dispositions to learn, social competence and self-concept, [and] emotional well being” (2002, 246). With regard to dispositions to learn, those authors described dispositions as environmentally sensitive, that is, they are not characteristics that are inborn but rather are developed through relational experiences. According to Bertram and Pascal the four dispositions that characterize the effective learner are “independence, creativity, self-motivation, and resilience” (2002, 246).

*Standards for the 21st-Century Learner* (AASL 2007), developed by experienced practitioners and professionals in the school library field, “require[d] that instruction focuses on the learning process” (AASL 2009, 6). AASL includes Dispositions in Action, along with Skills, Responsibilities, and Self-Assessment Strategies as threads embedded within its four *Standards for the 21st-Century Learner*, indicating that in information seeking (as in all learning experiences) students’ dispositions are central to their quality and quantity of learning.

### Independence

The disposition of independence is exhibited when a child is able “to be self-sufficient, to self-organize, and self-manage” (Bertram and Pascal 2002, 248). While the independent child is at ease with and enjoys the opportunity for making choices, the child also takes responsibility for the outcomes of those choices. With regard to resources, independent children “are capable of making selections and of locating and using resources appropriately. They develop competencies in organizing their environment, including the human environment, which allow them to have agency and affect change” (Bertram and Pascal 2002, 248). Independent children know they can ask for support from adults when needed but prefer to maintain autonomy in most situations.

The disposition of independence has great influence on successful students’ information-seeking behavior. The word *independent* is mentioned three times in AASL’s 2007 *Standards for the 21st-Century Learner*, twice in reference to independent learners. Standard 1.2.2 states that 21st-century learners “Demonstrate confidence and self-direction by making independent choices in the selection of resources and information” (2007, 4), paralleling language used by Bertram and Pascal (2002). Fostering students’ independence is not only an important mission in the U.S.; fostering independent and self-directed learners is a goal of school librarians all over the world (Danley et al. 1999).

### Creativity

Adjectives that describe children who possess the disposition of creativity are: curious, “imaginative, spontaneous, . . . innovative” and interested in their world (Bertram and Pascal 2002, 248). During their explorations these children naturally look for patterns, making comparisons and noting differences in whatever they find. They are often the ones to instigate play and expand on traditional ideas of play. Creative children often express themselves through humor, and enjoy the processes of thinking and learning. Because creative children have “an established self-identity based on secure notions of belonging” they tend to take risks (Bertram and Pascal 2002, 249).

At the intersection of research on creativity and intrinsic motivation lies the work of Teresa M. Amabile (1982a, 1982b). She has described primary components in the creative process: domain-relevant skills (knowledge, technical skills, and talent in the domain), creativity-relevant skills (cognitive styles, working styles, and personality styles conducive to using domain-relevant skills to produce creative products), and intrinsic task motivation (motivation to do the task primarily because it is involving, interesting, satisfying, or personally challenging). A crucial aspect of her work is the consideration of the social environment's effect on each component. Amabile's research suggests that the promise of evaluations or rewards has a negative effect on creativity, but not on technique or product likability. Her theoretical position is that intrinsic motivation is conducive to creativity and extrinsic motivation can be detrimental to creativity. According to Amabile, the factor that seems to account for the increase or decrease of intrinsic motivation is a student's perceived autonomy (Amabile, Hennessey, and Grossman 1986).

With regard to information seeking, the word *creativity* is used three times in AASL's *Standards for the 21st-Century Learner*. Standard 1.2.3 states that learners "demonstrate creativity by using multiple resources and formats"; 4.1.3 describes learners as "respond[ing] to . . . creative expressions of ideas in various formats and genres"; 4.1.8 characterizes 21st-century learners as "us[ing] creative and artistic formats to express personal learning" (2007 3, 7).

Based on the findings of creativity theorists, Alane Jordan Starko (2014) identified the following personal characteristics that contribute to an individual's creativity: curiosity; connectedness and metaphorical thinking; flexibility; logical thinking skills; independence in judgment; willingness to take risks; and perseverance, drive, and commitment. R. Keith Sawyer, also based on "a synthesis of models and research," has outlined an eight-stage model of the creative process:

1. Find the problem
2. Acquire the knowledge
3. Gather related information
4. Incubation
5. Generate ideas
6. Combine ideas
7. Select the best ideas
8. Externalize ideas. (2012, 140)

These characteristics of the creative individual, as well as those described by Bertram and Pascal (2002), are reflected in well-known information-seeking models, such as the Big6 (Eisenberg and Berkowitz 1999), the I-Search Process (Joyce and Tallman 1997), and the Information Search Process (Kuhlthau 2004).

### **Self-Motivation**

The disposition of self-motivation is exhibited in children who, of their own volition, engage deeply in problem-solving and interest-related activities. They understand that failure is a part of the process of succeeding, are willing to review and change strategies if needed, and are eager to share their accomplishments with any who will listen. Self-motivated children can be described as determined, persistent, positive, driven, and goal-oriented (Bertram and Pascal 2002, 249). These children are willing to "expend the necessary energy to achieve their goals" (Da Ros-Voseles and Fowler-Haughey 2007, 4).

Self-motivation can be compared to internal self-regulation within the framework of Self-Determination Theory (SDT) (Deci and Ryan 1985). SDT is an organismic motivational theory that stratifies three types of motivation: amotivation (which is actually a lack of motivation), extrinsic motivation, and intrinsic motivation. Of particular importance to this article are SDT's subtheories: Cognitive Evaluation Theory and Organismic Integration Theory.

Cognitive Evaluation Theory posits that social conditions producing a sense of *autonomy* and a perception of *competence* foster one's inherent tendency toward intrinsic motivation. *Relatedness* has also been found to be a significant contributing factor (Ryan and Deci 2000b). *Autonomy*, acting on one's volition, indicates a sense of initiation and value attached to the autonomous action (Deci and Ryan 2002). The need for *competence* is defined as "the need to experience oneself as capable of producing desired outcomes and avoiding negative outcomes" (Connell and Wellborn 1991, 51). Social environments that promote a perceived sense of competence for a particular action enhance intrinsic motivation for that action (Ryan and Deci 2000b). The need for *relatedness* "encompasses the need to feel securely connected to the social surround and the need to experience oneself as worthy and capable of love and respect" (Connell and Wellborn 1991, 51–52). SDT posits that while the needs for autonomy and competence are the most influential in maintaining intrinsic motivation, relatedness also plays a significant role. Research indicates that *the need to belong*, the desire for interpersonal attachments, is a fundamental human need (Baumeister and Leary 1995).

Organismic Integration Theory (OIT) stratifies types of extrinsic motivation, providing a framework for examining social contexts that "promote or hinder internalization and integration of the regulation for [specific] behaviors" (Ryan and Deci 2000a, 61). The factor that differentiates the types of motivation and regulatory styles is the level of autonomy perceived by the individual in a given situation. In amotivation, people either do not act at all or act without intent. Intrinsic motivation, on the other hand, stems from the self, and action is stimulated by interest, enjoyment, curiosity, or pleasure (Ryan and Deci 2000b). The final category, extrinsic motivation, is divided into four types. The first type, *external regulation*, refers to behaviors caused by an external demand or reward and is the least-autonomous type of extrinsic motivation. The second type, *introjected regulation*, is action caused by feelings of pressure and is done to avoid guilt or anxiety, or to enhance ego, pride, or self-worth. The third type, *identified regulation*, is a more-autonomous type of extrinsic motivation that results when one attaches personal importance to the behavior. The fourth type, *integrated regulation*, occurs when behaviors based on values are fully assimilated to the self (Ryan and Deci 2000b).

Self-motivation is exhibited when people are intrinsically driven to act for the purposes of pleasure, enjoyment, or satisfaction (Deci and Ryan 1985). It is important to note that, while intrinsic motivation is a primary type of self-determined motivation, it is not the only one. People self-regulate their behavior for a variety of external reasons, including making money and staying healthy; however, children are more likely than adults to have the freedom of acting for intrinsic reasons alone (Ryan and Deci 2000b).

Within the framework of AASL's *Standards for the 21st-Century Learner*, self-motivation is implied in Standard 4: "Pursue personal and aesthetic growth." Standard 4.2.1 states that students "display curiosity by pursuing interests through multiple resources," and 4.2.2 states that 21st-century learners "demonstrate motivation by seeking information to answer personal questions and interests, trying a variety of formats and genres, and displaying a willingness to go beyond academic requirements." Again, in 4.2.4 self-motivation is displayed when students "show an appreciation for literature by electing to read for pleasure and expressing an interest in various literary genres" (2007, 7).

The fourth strand of learning embedded in AASL's 2007 *Standards for the 21st-Century Learner* contains self-assessment strategies. (The other three are skills, dispositions in action, and responsibilities.) At the heart of this self-assessment strand is the students' ability to regulate their learning processes to the point of assessing their own work, and then self-prescribing strategies to improve its quality or to find the information desired. Of course, at first teachers and school librarians generally guide self-assessment in assigned information projects, and then "gradually transfer that responsibility to the student as he or she develops the capacity to assume it" (AASL 2009), thus promoting and fostering students' self-motivation in their reflections on their information-seeking behavior.

## Resilience

The final educative disposition Bertram and Pascal identified as characterizing the effective learner is *resilience*. Resilient children learn to develop strategies "for coping with change, recovering quickly and rebounding from disappointments" (2002, 249). They have the internal resources to rally from setbacks, retaining their own personality and spirit. Often, they enjoy challenges and are the first to offer solutions to problems. The disposition of resilience can develop out of a will to survive, allowing dependence on others to wax and wane without severing relationships. Resilient children understand that "sometimes adults get things wrong" and that children may have to live with those things, at least temporarily. Resilient children "understand the rewards to be gained from the processes of engagement, negotiation, assertion and persuasion" (2002, 249), processes that develop naturally from children's recurring problem-solving experiences. In essence, students not only learn to overcome, but are "strengthened by, and [are] even . . . transformed by experiences of adversity" (Cesarone 1999, 12). The Council of Chief State School Officers has stated that resilience is a disposition leading to socio-emotional skills or behaviors that are associated with success in becoming a contributing member of society (2013).

As in life, resilience is an important disposition for success in information seeking. Julie Hersberger noted factors in people's lives that develop resiliency and which also relate to information seeking. They are hardiness, locus of control, and learned resourcefulness, all of which when put to positive use produce experiences that build self-efficacy (2011). AASL's *Standards for the 21st-Century Learner* state that, for students to "inquire, think critically, and gain knowledge" (Standard 1), they must, as 1.2.6 states, "display emotional resilience by persisting in information searching despite challenges" (2007, 4). Often, resilient children have confidence and a willingness to take risks because their interests motivate them to persevere until the desired outcome is reached (Bertram and Pascal 2002; Cesarone 1999; Grotberg 1993).

## Methodology

### Participants

The students in the study conducted in Colorado Springs were selected from a pool of fifth-graders in eight classes from three diverse schools in the community. The students in the Kampalan study were boys and girls 9 to 13 years old, primarily orphans, attending a small private primary school on the outskirts of Kampala, Uganda. The number of students in the age range attending on the dates of the study in Colorado Springs was 100, and in Kampala was 31.

The Hofstede-Bond model of five cultural value dimensions (Hofstede and Bond 1988) suggests that the Ugandan culture is highly collectivist (persons give unquestioning loyalty to “in groups” that, in exchange, take care of them), whereas the U.S. is highly individualistic (people tend to look after only themselves and their nuclear family; Hofstede Center 2014). The disparity between the United States and Uganda in this cultural dimension led us to believe that a study of the social contexts surrounding children from these countries who show a tendency toward intrinsic motivation for information seeking might lead to a better understanding of contextual factors that contribute to this phenomenon.

## **Instrument for Identifying Study Participants**

The Self-Regulation Questionnaire for Information Seeking (SRQ-IS) (Crow 2009) was developed by one of the authors of this paper and used in the first study in Colorado. It is an adaptation of the SRQ-A (Academic Self-Regulation Questionnaire; Ryan and Connell 1989) for the domain of information-seeking behavior. The instrument used to identify the Ugandan informants was the Self-Regulation Questionnaire for Information Seeking-Uganda (SRQ-IS-U; Crow 2015), an adaptation of the SRQ-IS (Crow 2009) to allow for clarification of terms for the Kampalan informants. Students who were identified from the survey as having a dominant intrinsic motivation to seek information with at least a .03 differential from their second dominant motivation domain were chosen as informants for the two studies. Nine children were identified in the Colorado study (pseudonyms: Alexandra, Bailey, Bob, Carl, Michael, Mickey, Melissa, Nicole, and Victoria), and five in the Kampala study (pseudonyms: John, Lukshebyi, Melissa, Namata, and Salim).

## **Data Collection**

### **Overview**

Data collection for both studies began with interviews and continued with observation of environment and a drawing activity.

### **Interviews**

Interviewing, the first method of data collection, was chosen because the research should begin and be based on the experiences of the students in their own words, their own language, and taken in the direction they lead. The interviews were semi-structured and open-ended. They began with broad questions and then narrowed in with more specific questions on the experiences that illuminated the phenomenon of interest—intrinsic motivation for information seeking (Creswell 1998, 121).

Another possible interview strategy considered was the Critical Incident Technique (CIT). CIT is defined as “a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles” (Flanagan 1954, 1). It is used primarily to gather from informants information drawn from their memory of particular incidents. “This is usually satisfactory when the incidents reported are fairly recent and the observers were motivated to make detailed observations and evaluations at the time the incident occurred” (Flanagan 1954, 14). However, because the children in the study were recalling incidents that may or may not have been recent,



and had no reason for making detailed observations and evaluations at the time of the incidents, it was determined that asking broad questions and using probing follow-up questions based on the students' answers were more appropriate in working with the children in these studies.

On a deeper level, active, in-depth interviews "are conversations where meanings are not only conveyed, but cooperatively built up, received, interpreted, and recorded by the interviewer" (Silverman 2004, 147). The informant and interviewer collaborated together to construct meaning from the student's experiences. The questions and information sought in these interviews was: a) "What makes a good (happy) day for you?" (factors in the students' life experiences that have contributed to their dispositions toward seeking information generally), and b) "Think of a time recently when you wanted or needed to find out information or learn something, either for school or your own interest. Could you tell me about what you remember of that time?" (factors surrounding their information-seeking experiences, in particular the types of questions they ask). The protocol for the second line of questioning (information-seeking experiences) was developed by Andrew K. Shenton and Pat Dixon (2003) for a study of the information-seeking behavior and needs of young people, and was based on a similar study by Brenda Dervin et al. (1976).

## **Observation of Environment**

The role used by the researcher for the observation of environment activity in the two settings was that of complete observer. Specifically, the room and other artifacts surrounding the informants' classroom environment were examined and noted; relevant aspects of their communities were also observed and noted. The examination of the physical evidence of the experience of children shed light on the factors that influenced their intrinsic motivation, either as a disposition or specifically for information seeking.

## **Drawing Activity**

Informants were asked to draw a picture illustrating a good (happy) day (picture A) and another about a recent information-seeking experience (picture B). These directions purposefully mirrored the interview questions and served as a means to check reliability by comparing the content and tone of the artwork with students' interview answers. The materials used for the activity were standard-sized pieces of blank paper and pencils, markers, and crayons. The Consensual Assessment Technique was used to evaluate students' original work. This procedure, established by Amabile (1983) to use experts in a field to evaluate artistic products for creativity, has been used in other studies concerned with children's art, creativity, and intrinsic motivation (Amabile 1979, 1982a; Amabile, DeJong, and Lepper 1976; Koestner et al. 1984). Three certified elementary art teachers served as experts for the studies, scoring the students' artwork on evaluation forms created by the researchers using the Amabile protocol. These scores were used to determine the predominant characteristics of the students' drawings, as well as to establish inter-rater reliability of the evaluations.

## **Limitations**

The methodological limitations to the studies include: the use of a sample that is purposive (Miles and Huberman 1994) and not random; the gathering of informants from only two geographical areas; comparing the findings of children studied in 2008 as compared with those

studied in 2014; and the limitation of the use of the self-regulation questionnaires with children who are able to understand and respond to the questionnaire (with an interpreter). Because of these limitations, the results of the study cannot be generalized to all students in all situations, to all students of collectivist or individualistic cultures, or to all students in Colorado Springs, Colorado, or in Kampala, Uganda.

## Findings and Discussion

### Overview

Analysis of the data indicates that students from both Kampala and Colorado Springs exhibited an affinity for *play*, and a tendency toward *creativity*, but that their attitudes toward their own *competencies* and *competition* differed. Within these findings the students from both cultures show evidence of the dispositions of effective learners: independence, creativity, self-motivation, and resilience (Bertram and Pascal 2002).

### Play

The Kampalan informants spoke enthusiastically about play. Every Kampalan student mentioned at least one sport or outdoor activity, especially soccer and dodgeball. At recess, many boys played soccer, while most girls played dodgeball. They discussed how much they enjoyed these games, both when they win and when they lose, a common trait of resilient children who tend to be happy “with new challenges” (Bertram and Pascal 2002, 249). When John was asked why he liked soccer even when he loses, he said, “I just enjoy it. I love soccer so much.” Other outdoor activities mentioned were riding bicycles, swimming, driving scooters, skipping rope, swinging, racing, and playing in the bouncing castle at the amusement park.

The Coloradan informants also recounted many play experiences. Sports (mostly football) were mentioned, but not as often as with the Kampalan students. The Coloradans discussed outdoor activities such as hiking, camping, and biking. “Yeah, behind my house, there’s all kinds of trails and stuff and me and my friends will go up and ride” (Michael). Playing on the computer was an activity described by this set of students, engaging in video games both alone and with friends (Crow 2011).

The students from Colorado discussed information-seeking activities they do for enjoyment. As examples, Victoria described searching the Internet randomly for information in her spare time, and Carl recalled incidents in which he caught and observed bugs for fun. Ugandan informants also recounted occasions when information seeking was fun. Namata described playing at the river’s edge during the rainy season so she could see whether or not the riverbank receded and the river got bigger. She expressed enjoyment at testing out the definition of “erosion” she had heard in school. These children, both through their words and pictures, “indicated that they viewed information seeking as fun and as a regular part of their leisure time” (Crow 2011, 11).

Lukshebyi was the only Kampalan child to mention imaginative play, a type of play mentioned much more often by the Colorado Springs students. She gave a detailed description of playing cooking, with names of foods and how to prepare them. She made a point of showing the researcher her pretend cooking area—consisting of a cup, spoon, and several objects made of mud—in her home in the community. It is interesting to note that the head teacher and founder of the school first used play as “bait” to entice students to come to her school.

The school started in a crazy way, because children were all over the community in the street, and doing dangerous things to each other, to the community, you know, stealing, because they had no food. They had no one to care for them. So first of all, I went under the tree and then called some. I'm like "Come, come!" Just like playing around. "Come on, we'll play. What are you doing on the rubbish pit? Let's go and play." So they started coming. They would hear us singing and they would come. They would see games, and they would come. (Interview with head teacher, June 2014)

These comments indicate that play and curiosity were central in drawing children to the Ugandan school. As with all children, play "increases affiliation with peers, releases tension, advances cognitive development, increases exploration, and provides a safe haven in which to engage in potentially dangerous behavior" (Santrock 2006, 281). Play is generally self-motivated, and through play children can meet the psychological needs of competence, autonomy, and relatedness. In fact, play is considered a prototypical example of intrinsic motivation because it is action motivated by enjoyment (Ryan, Kuhl, and Deci 1997). The Kampalan children's view of their school as a safe haven in which to learn and play attracted them to the school, perhaps as much as any other factor.

The Coloradan children also viewed play as important and worthy of their protection. For instance, they saw taking away their recess time as a terrible threat and would do whatever they could to protect that time. Related to their sense of play, these students also displayed a keen sense of humor, not a trait typically found in the Ugandan study participants. The Coloradan participants often gave the reason "because they are funny" for choosing friends and why they liked adults, and why they read various books and watched specific movies.

## Creativity

Creativity, "the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others" (Franken 1994, 396), was a characteristic of both sets of informants. In their interviews, three of five Kampalan students and six of nine Coloradan students described writing and drawing as activities they do for fun. The activities of these students typify Amabile's (1982a, 1982b) theory of creativity-relevant skills: cognitive styles, working styles, and personality styles conducive to using domain-relevant skills to produce creative products. These students mentioned in-school activities as well as writing and drawing at home for fun. Ugandan Melissa specifically mentioned a precious book she kept at home for personal writing, and three Coloradans described books they were currently writing at home. In addition to writing and drawing, Lukshebyi exhibited her creativity by elaborately describing her pretend cooking experiences.

The Coloradan students also mentioned creative expressions through music, dancing, photography, building, and technology creations, and additionally mentioned looking for information *about* building, drawing, and creating websites, using their new-found information to continue their creative activities (Crow 2011). As examples, two Coloradan students (Victoria and Nicole) described seeking out and taking photographs of wildlife to better study and draw them, and Michael recalled looking for information about photography, creating websites, and doing "extreme sports" so he could create a website about himself and his friends doing fancy skateboarding tricks. These examples illustrate Bertram and Pascal's assertion that children who possess the disposition of creativity are "imaginative, spontaneous, ... innovative" (2002, 248).

The drawings the children produced also indicated the characteristic of creativity. The art evaluation process was adapted from a procedure established by Amabile (1982b) to evaluate

creativity in authentic art. The evaluation forms prepared for the judges contained a scale for each of nine art dimensions. The scale range was: very poor, poor, average, good, and very good. The dimensions were for creativity—novel idea, effort evident, detail, complexity, variation in shapes, and novel use of materials—and for technical goodness—organization, neatness, and expression of meaning. These dimensions were among those listed in the artistic clusters of creativity and technical goodness evaluated in other *creativity in art* studies (Amabile 1979, 1982; Amabile, DeJong, and Lepper 1976; Koestner et al. 1984). The dimensions were chosen for these studies based on their appropriateness for the age group and the particular art activity.

The evaluation forms (adapted from Amabile 1982b) were collected and values assigned to the scale scores, using 1 for very poor to 5 for very good. The dimensions were grouped by creativity and technical goodness, and the mean scores calculated for each of the student's pictures in each study. A Cronbach's alpha was calculated to test the reliability of the judges' scoring for each of the artistic dimensions in the art evaluations. Internal consistency was measured for all three judges' evaluation scores for the two drawings produced by the students in both studies. Because six of nine dimensions of the Ugandan picture A ("a good (happy) day for me") evaluations showed low, zero, or negative internal consistency, the evaluations of those pictures were not considered. The low to negative scores may be due to the small sample size (De Vaus 2002), or perhaps because the Ugandan students were not familiar with the art materials; picture A was the first one they drew. A score of alpha 0.6 or greater (indicating an acceptably reliable set of responses; George and Mallery 1999; Kline 2000) was found for all but the "complexity" and "novel use of materials" dimensions for the Ugandan picture B. The findings indicate that for seven of nine dimensions for picture B, the evaluation of Ugandan students' scores for the artistic dimensions displayed an "acceptable" internal consistency across all three judges (see table 1). In the Coloradan study, a score of alpha 0.7 or greater (indicating a reliable set of responses; Hinton 2004, 302–3) was found for all dimensions but "novel idea" for picture A, and for all the dimensions for picture B (Crow 2011; see table 2). For these reasons, Ugandan picture B ("a time when I sought information"), and each of the Coloradans "best work" (determined by the picture (A or B) receiving the highest total score from all three judges) was used for analysis of artistic dimensions, so that only one picture was used for art evaluation for students from both studies.

Table 1. The Cronbach alpha score for the judges’ evaluations of the artistic dimensions for Ugandan picture B.

Artistic Dimension	Alpha Score for Picture B*
Creativity Cluster	
Novel idea	.73
Effort evident	.62
Detail	.66
Complexity	.59
Variation of shapes	.65
Novel use of materials	.58
Technical Cluster	
Organization	.85
Neatness	.76
Expression of meaning	.83

\*Picture B topic was “a time when I sought information”

Table 2. The Cronbach’s alpha score for the judges’ evaluations of the artistic dimensions for Coloradan pictures A and B.

Artistic Dimension	Alpha Score for Picture A*	Alpha Score for Picture B**
Creativity Cluster		
Novel idea	.47	.90
Effort evident	.79	.90
Detail	.85	.90
Complexity	.84	.83
Variation of shapes	.78	.90
Novel use of materials	.79	.96
Technical Cluster		
Organization	.77	.89
Neatness	.92	.82
Expression of Meaning	.74	.89

\*Picture A topic was “what makes a good day for me”

\*\*Picture B topic was “a time when I sought information”

From Crow 2011.

Using the score of 3.00 as the midpoint of the scale, all five Ugandan informants scored above the midpoint in creativity, and four of five scored above the midpoint in technical goodness based on the composite mean scores in each cluster for picture B. The range for the five students’ composite scores was 3.22 to 4.56 in creativity, and 2.89 to 4.67 in technical goodness. Namata, the only student who scored below midpoint on either of the composite mean scores for creativity and technical goodness, scored below midpoint in technical goodness only (technical goodness 2.89).

In the Colorado study eight out of nine informants scored above the midpoint in creativity and technical goodness based on the composite mean scores for the students’ “best work.” The range for the eight student’s composite scores was 3.11 to 4.61 in creativity and 3.22 to 4.44 in technology goodness. Bob was the only student who scored below average on the composite mean scores, and he scored below the midpoint for both creativity (2.72) and technical goodness (2.33) (Crow 2011).

As indicated by statements in their interviews as well as by the evaluations of the art teachers, students in both studies exhibited a tendency toward creativity. Creativity emanates from the self and, therefore, is by definition intrinsic. Amabile (1979) posited that people who are intrinsically

motivated for an artistic task exhibit higher levels of creativity than those who are not. It would seem the salient psychological need satisfied through acts of creativity is autonomy: a person's ability to choose what to create and how to create it. "A long tradition of empirical research has established that personal autonomy is a core characteristic of the creative personality" (Sheldon 1995, 25). Researchers have found that forces such as surveillance, evaluation, rewards, competition, over-control, restricting choice, and pressure can serve to suppress intrinsic motivation (Hennessey and Amabile 1987), but these are forces all of us—creative or not—confront in daily living. The assumption is that creative, autonomous people do not experience fewer controlling forces but that they are better able to "resist the controlling situational and intrapersonal forces that can undermine creativity" (Hennessey and Amabile 1987, 25).

The very fact that the Ugandan students were able "to locat[e] and us[e] resources"—basic as they may seem—for creative expression points both to their independent nature (Bertram and Pascal 2002, 248) and their desire for creative outlets. The children described their lives as difficult, which was verified through the environment observed by the researcher. It is interesting to note that, despite their hardships, the children scored above midpoint for creativity on their drawings. Ugandan Melissa, however, described how hardships and abuse decreased her desire to be creative, at least temporarily.

I don't like to draw anymore. A lady, who doesn't like me, beat me because she thought I said insulting words to her, but I did not. When she beat me, I lost interest in doing the things I like. I hope I want to draw again someday. (Interview with Melissa, June, 2014)

Indeed, difficult life situations can cause children's creativity to decline (Cropley et al. 2010), yet researchers have found that "creativity is a robust human trait" (Beghetto 2010) and that such experiences help to develop resilience, an essential disposition for the effective learner (Bertram and Pascal 2002). While telling this story, Melissa expressed hope that her inner motivation and creativity would be restored. In fact, a drawing she did for this study the very next day was evaluated by the professional judges as above midpoint on the creative dimensions scale.

According to Starko (2014), "the characteristics that allow individuals to be creative [are] independence, courage, and persistence." Certainly the life of the Ugandan subjects, indeed their fight for survival, provided context for developing these characteristics.

Having more access to resources than the Ugandan students, the Coloradan informants' descriptions of creative activities and their information seeking *about* many of those topics indicate that they "engage in information seeking experiences that include the use of creativity... and that the inclusion of each enhances the intrinsically motivating aspects of the other" (Crow 2011, 26). The data suggest that creativity both contributed to and manifested itself (through drawing, writing, imaginative play, and technology creations) in intrinsic motivation for information seeking in the lives of these children in Colorado.

## Competence, Competence Building, and Competition

The Ugandan informants described themselves as competent (skipping rope, soccer, dodgeball, math, sentence structure, writing letters), and they enjoyed these activities both when they won and lost. In fact, a salient characteristic of this set of informants was the desire and determination to improve their skills and knowledge. Salim stated that he liked to play soccer whether he won or lost "because we will be persistent until we win." Melissa described how she is good at several class subjects, but not in math, so she asked her mother to give her math problems to get better. Namata recounted a "good day" is one in which she spends time with her teachers and

“revising her books [based on their feedback] so that I can be smarter.” All of these examples point to independent and resilient students who have learned “to bounce back after setback, hindrance, or frustration and retain temperament, personality, and spirit” (Bertram and Pascal 2002, 249).

Research in Self-Determination Theory purports that people with an autonomy orientation regulate “behaviour on the basis of interests and self-endorsed values” (Deci and Ryan 2002, 21), and they use informational feedback to improve their performance and skills. *Informational feedback* informs recipients of their competence and shows them what to do to become more competent. If the feedback gives information to the person about what the person is doing right or what can be done better, the feedback may increase motivation. However, if the person merely feels controlled by the giver of the feedback (i.e., if you do what I want I’ll give you a good grade), that sense of being controlled will counterbalance the effect of informational feedback and reduce intrinsic motivation (Deci and Ryan 2002). The difference, research shows, is the interpersonal context surrounding the giving of the feedback. Though it may seem logical that autonomy-supportive feedback would better fit students of individualistic cultures, recent studies have shown that autonomy-supportive educational strategies have proved successful in highly collectivist cultures (Vansteenkiste et al. 2005; Jang et al. 2009). In the case of the Ugandan students, it is clear that they not only take informational feedback well, they seek it for the purpose of improving their competence. They have developed the trait of independence “to self-organize and self-manage” (Bertram and Pascal 2002, 248) as well as make autonomous learning decisions.

Students in the Colorado study also described many activities they believed they were competent doing, and subjects about which they believed they were knowledgeable. Only one Coloradan student’s self-description did not include competence in at least one academic area. Another prominent characteristic of the Coloradan students was their noncompetitiveness. As an example, Bailey discussed her involvement in cross-country running and knew that there was a system by which runners were placed and given rewards, but when asked why she participated she said it was because she liked the feel of the wind in her hair and that it made her happy to run. Michael had a passion for the Dallas Cowboys, especially his favorite player Michael Irvin (which is why he chose “Michael” as his alias). He also liked to play football, but his passion was not for winning, as evidenced by his lack of concern or even mention of the scores of games, his own scoring, or the Cowboys’ record; instead, student Michael was passionate about Irvin’s humble beginnings and how he gave back to his community. Michael also described the fun he had playing and the times he spent with his dad watching their team on television. Michael’s passion was based on affiliation, relationships, and the joy of playing but not on competition and winning.

Competition is a complicated phenomenon in that it can be a source of motivation, either intrinsic or extrinsic, and sometimes it manifests in actions indicating both. When the emphasis is on winning, competition becomes a controlling (and therefore extrinsic) force. When the emphasis is on the informational elements of the activity (such as what the player can do to play better), it allows participants to gain information that helps them increase their own competence. “When there is less focus on winning or losing and more focus on playing well in a competitive situation, there will be less detrimental effects of competition on intrinsic motivation” (Deci and Ryan 1985, 325). The Coloradan students appeared to have decreased or even blocked out the controlling factors of competition, and focused primarily on its informational factors in their various activities, thus enabling themselves to get better *and* still retain the joy in their play. This



finding is all the more interesting in light of the competitive nature of the individualistic society in which they live.

## Conclusions and Recommendations

### Play Is an Important Contributor to Intrinsic Motivation.

Play was an important contributor to the intrinsic motivational dominance in both the Colorado Springs and Kampalan informants. The play the students described indicated that their playful activities contributed to fulfillment of their needs for autonomy, competence, and relatedness, all components described as contributory to fostering self-motivation (Deci and Ryan 1985). In fact, both sets of informants not only discussed play often and enthusiastically, they also connected information seeking with play.

These findings suggest that the play life of children may be an important contributor to their intrinsic motivation for information seeking, as well as their ability to be independent and creative. Indeed, times of play are made up of the rare moments when children are the directors of their own worlds, when they can determine and control their own actions (Ryan, Kuhl, and Deci 1997). School librarians and teachers can key in on the energy play provides by using instructional strategies that are playful, such as games and gaming, humor, storytelling, questing, and inquiry-based learning (Crow and Robins 2012). Information seeking becomes adventurous play rather than a series of dry assignments. However, a caveat when using playful strategies is that the educator should strive to *keep* them playful, deemphasizing rewards, pressure, and the type of competition that stresses winning rather than getting better—all extrinsic motivators that have been proven to decrease intrinsic motivation (e.g., Hennessy and Amabile 1987).

### Information-Seeking Skills Are Best Built on Students' Interests and Creativity.

Students in both Colorado and Uganda described experiences of information seeking surrounding their interests in varied topics. Teaching information-seeking skills need not be lessons of drudgery, leading students down the path of producing cookie-cutter projects. Instead, when educators shift from assignments that direct students to answer *teachers'* questions to those that allow students the freedom to ask their *own* questions, they are fostering independence and self-motivation. This is the fuel that will carry students beyond filling in blanks and bubbles on standardized test forms to finding deeper understandings and developing critical-thinking skills.

Creativity is often thought of as the offspring of art and music classes; however, creativity can be both the driver of information seeking and a means of manifesting what is discovered. "To raise new questions, new possibilities, to regard old problems from a new angle, requires imagination and marks real advances in science" (Dillon 1982, 98). Students develop creative-thinking skills through brainstorming, problem solving, and disseminating new knowledge, and at the same time they learn to hone their critical thinking by evaluating the practicality and efficacy of ideas and solutions (Booth 2013). When school librarians work with classroom and subject teachers to incorporate creative outlets in project designs—better yet, include art and music teachers in the collaborations—these librarians are setting up contexts within which students can both express and develop individual creativity.

## Resiliency Enhances Information Seeking.

While resiliency is a disposition of the effective learner, “research has shown that most parents and caregivers do not know about resilience or how to promote it in children. Thus, too many adults inhibit and even thwart the development of resilience” (Grotberg 1993, 1). In an attempt to improve this situation, the Bernard van Leer Foundation sponsored a study, the International Resilience Project (IRP), which sought to improve opportunities for young children living in disadvantaged circumstances. The findings from the IRP were:

- Resilience has both global and culturally/contextually specific aspects.
- Aspects of resilience exert different amounts of influence on a child’s life depending on the specific culture and context in which resilience is realized.
- Aspects of children’s lives that contribute to resilience are related to one another in patterns that reflect a child’s culture and context.
- How tensions between individuals and their cultures and contexts are resolved will affect the way aspects of resilience group together. (Bain et al. 1997, 118–28)

Keeping these points in mind, educators and parents can foster resiliency through the use of open-ended problems and opportunities for children to seek information without “dumbing down” or making the process easy, but allowing children to experience challenges in a nurturing environment. Informational, rather than controlling, feedback can be employed so that students will learn to maintain self-esteem and develop successful self-regulation. A nurturing environment combined with monitored experiences eventually leads to the student’s ability to approach and overcome information-seeking challenges without fear of failure (Bertram and Pascal 2002). When students encounter a roadblock in their projects, teachers and school librarians can not only offer new information-seeking paths, but can also coach them toward resilient reactions and attitudes, helping them to succeed both in school and in life (Moreillon and Fontichiaro 2008, 66).

## Final Comments

The importance of our students becoming effective 21st-century learners cannot be overstated. Undoubtedly, knowing subject content, as evidenced by doing well on standardized tests and other outcome-based measures, is important. However, studies show that critical to children’s future success—even their very survival—is “their social, attitudinal and affective learning . . . [all] powerful indicators of long term achievement in children” (Bertram and Pascal 2002). Key to these enabling “super skills” (Ball 1994) are independence, creativity, self-motivation, and resilience, all dispositions needed to become effective information seekers as well as effective learners. By providing student-centered inquiry opportunities, thoughtful and autonomy-supportive feedback, and by knowing about and relating to individual students, teachers and school librarians can foster the dispositions that will enable students of all cultures to become lifelong learners.

## Works Cited

- Amabile, Teresa M. 1979. "Effects of External Evaluation on Artistic Creativity." *Journal of Personality and Social Psychology* 37 (2): 221–33.
- . 1982a. "Children's Artistic Creativity: Detrimental Effects of Competition in a Field Setting." *Personality and Social Psychology Bulletin* 8 (3): 573–78.
- . 1982b. "Social Psychology of Creativity: A Consensual Assessment Technique." *Journal of Personality and Social Psychology* 43 (5): 997–1013.
- Amabile, Teresa M., William DeJong, and Mark R. Lepper. 1976. "Effects of Externally Imposed Deadlines on Subsequent Intrinsic Motivation." *Journal of Personality and Social Psychology* 34 (1): 92–98.
- Amabile, Teresa M., Beth A. Hennessey, and Barbara S. Grossman. 1986. "Social Influences on Creativity: The Effects of Contracted-For Reward." *Journal of Personality and Social Psychology* 50 (1): 14–23.
- American Association of School Libraries. 2007. *Standards for the 21st-Century Learner*. <[http://ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL\\_LearningStandards.pdf](http://ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL_LearningStandards.pdf)> (accessed March 14, 2016).
- . 2009. *Empowering Learners: Guidelines for School Library Programs*. Chicago: ALA.
- Bain, Bruce, et al., eds. 1997. "The International Resilience Project: Findings from the Research and the Effectiveness of Interventions" In *Psychology and Education in the 21st Century: Proceedings of the 54th Annual Convention of the International Council of Psychologists*. Edmonton: ICPress, 118–28.
- Ball, Christopher. 1994. *Start Right: The Importance of Early Learning*. London: RSA.
- Baumeister, Roy F., and Mark R. Leary. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation." *Psychological Bulletin* 117 (3): 497–529.
- Beghetto, Ronald A. 2010. "Creativity in the Classroom." In *The Cambridge Handbook of Creativity*, edited by James C. Kaufman and Robert J. Sternberg, 447–63. New York: Cambridge University Press.
- Bertram, Tony, and Christine Pascal. 2002. "What Counts in Early Learning?" In *Contemporary Perspectives in Early Childhood Curriculum*, edited by Olivia N. Saracho and Bernard Spodek, 241–56. Greenwich, CT: Information Age.
- Booth, Eric. 2013. "A Recipe for Artful Schooling." *Educational Leadership* 70 (5): 22–27.
- Cesarone, Bernard. 1999. *Resilience Guide: A Collection of Resources on Resilience in Children and Families*. Champaign, IL: ERIC Clearinghouse on Elementary and Early Childhood Education. <<http://files.eric.ed.gov/fulltext/ED436307.pdf>> (accessed March 14, 2016).
- Connell, James P., and James G. Wellborn. 1991. "Competence, Autonomy, and Relatedness: A Motivational Analysis of Self-System Processes." In *Self-Processes and Development*:

*The Minnesota Symposium on Child Psychology, Vol. 23*, edited by Megan R. Gunnar and L. Alan Sroufe, 43–77. Hillsdale, NJ: Erlbaum.

- Council of Chief State School Officers. 2013. *Knowledge, Skills, and Dispositions: The Innovation Lab Network State Framework for College, Career, and Citizenship Readiness, and Implications for State Policy*.  
<[www.ccsso.org/Documents/ILN%20Knowledge%20Skills%20and%20Dispositions%20CCR%20Framework%20February%202013.pdf](http://www.ccsso.org/Documents/ILN%20Knowledge%20Skills%20and%20Dispositions%20CCR%20Framework%20February%202013.pdf)> (accessed March 14, 2016).
- Creswell, John W. 1998. *Qualitative Inquiry and Research Design: Choosing among Five Traditions*. Thousand Oaks, CA: Sage.
- Cropley, David H., et al., eds. 2010. *The Dark Side of Creativity*. Cambridge: Cambridge University Press.
- Crow, Sherry R. 2009. "Relationships that Foster Intrinsic Motivation for Information Seeking." *School Libraries Worldwide* 15 (2): 91–112.
- . 2011. "Exploring the Experiences of Upper Elementary School Children Who Are Intrinsically Motivated to Seek Information." *School Library Media Research* 14.  
<[www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol14/SLR\\_ExploringtheExperiences\\_V14.pdf](http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol14/SLR_ExploringtheExperiences_V14.pdf)> (accessed March 14, 2016).
- . 2015. "The Information-Seeking Behavior of Intrinsically Motivated Elementary School Children of a Collectivist Culture." *School Library Research* 18.  
<[www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol18/SLR\\_InformationSeekingBehavior\\_V18.pdf](http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol18/SLR_InformationSeekingBehavior_V18.pdf)> (accessed March 14, 2016).
- Crow, Sherry R., and Jennifer Robins. 2012. "Play in the Library: Primordial Learning." *Teacher Librarian* 39 (5): 36–37, 40–43.
- Danley, Elizabeth B., et al. 1999. "Unleashing the Theory: Connecting Learning Theory to Building Information Seeking Skills." In *Unleash the Power! Knowledge, Technology, Diversity: Papers Presented at the Third International Forum on Research in School Librarianship, November 10–14*, edited by Lynne Lighthall and Eleanor Howe, 121–32. Birmingham, AL: International Association of School Librarianship.
- Da Ros-Voseles, Denise, and Sally Fowler-Haughey. 2007. "Why Children's Dispositions Should Matter to All Teachers." *Beyond the Journal: Young Children on the Web*.  
<[www.naeyc.org/files/yc/file/200709/DaRos-Voseles.pdf](http://www.naeyc.org/files/yc/file/200709/DaRos-Voseles.pdf)> (accessed August 5, 2015).
- Deci, Edward L., and Richard M. Ryan. 1985. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Springer Science and Business Media.
- Deci, Edward L., and Richard M. Ryan, eds. 2002. *Handbook of Self-Determination Research*. Rochester, NY: University of Rochester Press.
- Dervin, Brenda, et al. 1976. *The Development of Strategies for Dealing with the Information Needs of Urban Residents, Phase I—The Citizen Study*. Seattle: University of Washington School of Communications.
- De Vaus, David A. 2002. *Surveys in Social Research*, 5th ed. London: Routledge.

- Dillon, James T. 1982. "Problem Finding and Solving." *The Journal of Creative Behavior* 16 (2): 97–111.
- Eisenberg, Michael B., and Robert E. Berkowitz. 1999. *Teaching Information and Technology Skills: The Big6 in Elementary Schools*. Worthington, OH: Linworth.
- Flanagan, John C. 1954. "The Critical Incident Technique." *Psychological Bulletin* 51(4): 327–58. <[www.apa.org/pubs/databases/psycinfo/cit-article.pdf](http://www.apa.org/pubs/databases/psycinfo/cit-article.pdf)> (accessed March 14, 2016).
- Franken, Robert E. 1994. *Human Motivation*, 3rd ed. Pacific Grove, CA: Brooks/Cole.
- George, Darren, and Paul Mallery. 1999. *SPSS for Windows Step by Step: A Simple Guide and Reference*. Boston: Allyn and Bacon.
- Grotberg, Edith. 1993. *Promoting Resilience in Children: A New Approach*. University of Alabama at Birmingham: Civitan International Research Center.
- Hennessey, Beth A., and Teresa M. Amabile. 1987. "Creativity and Learning: What Research Says to the Teacher." Washington, DC: National Education Association <<http://files.eric.ed.gov/fulltext/ED312835.pdf>> (accessed March 16, 2016).
- Hersberger, Julie A. 2011. *Resilience Theory, Information Behaviour and Social Support in Everyday Life*. Canadian Association for Information Science Proceedings.
- Hinton, Perry R. 2004. *Statistics Explained*, 2nd ed. New York: Routledge.
- Hofstede Center. 2014. "Geert Hofstede: National Culture." <http://geert-hofstede.com/national-culture.html> (accessed March 16, 2016).
- Hofstede, Geert, and Michael Harris Bond. 1988. "The Confucius Connection: From Cultural Roots to Economic Growth." *Organizational Dynamics* 16 (4): 5–21.
- Jang, Hyungshim, et al. 2009. "Can Self-Determination Theory Explain What Underlies the Productive, Satisfying Learning Experiences of Collectivistically Oriented Korean Students?" *Journal of Educational Psychology* 101 (3): 644–61.
- Joyce, Marilyn Z, and Julie I. Tallman. 1997. *Making the Writing and Research Connection with the I-Search Process: A How-To-Do-It Manual*. New York: Neal-Schuman.
- Kline, Paul. 2000. *The Handbook of Psychological Testing*, 2nd ed. London: Routledge.
- Koestner, Richard, et al. 1984. "Setting Limits on Children's Behavior: The Differential Effects of Controlling vs. Informational Styles on Intrinsic Motivation and Creativity." *Journal of Personality* 52 (3): 233–48.
- Kuhlthau, Carol Collier. 2004. *Seeking Meaning: A Process Approach to Library and Information Services*, 2nd ed. Westport, CT: Libraries Unlimited.
- Merriam-Webster, Inc. 2015. "Disposition." <[www.merriam-webster.com/dictionary/disposition](http://www.merriam-webster.com/dictionary/disposition)> (accessed March 14, 2016).
- Miles, Matthew B., and A. Michael Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*, 2nd ed. Thousand Oaks, CA: Sage.

- Moreillon, Judi, and Kristin Fontichiaro. 2008. "Teaching and Assessing the Dispositions: A Garden of Opportunity." *Knowledge Quest* 37 (2): 64–67.
- Ryan, Richard M., and Edward L. Deci. 2000a. "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions." *Contemporary Educational Psychology* 25 (1): 54–67. <[www.selfdeterminationtheory.org/SDT/documents/2000\\_RyanDeci\\_IntExtDefs.pdf](http://www.selfdeterminationtheory.org/SDT/documents/2000_RyanDeci_IntExtDefs.pdf)> (accessed January 27, 2015).
- . 2000b. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being." *American Psychologist* 55 (1): 68–78.
- Ryan, Richard M., and James P. Connell. 1989. "Perceived Locus of Causality and Internalization: Examining Reasons for Acting in Two Domains." *Journal of Personality and Social Psychology* 57 (5): 749–61.
- Ryan, Richard M., Julius Kuhl, and Edward L. Deci. 1997. "Nature and Autonomy: An Organizational View of Social and Neurobiological Aspects of Self-regulation in Behavior and Development." *Development and Psychopathology* 9 (4): 701–28.
- Santrock, John W. 2006. *Life-Span Development*, 10th ed. Boston: McGraw-Hill.
- Sawyer, R. Keith. 2012. *Explaining Creativity: The Science of Human Innovation*, 2nd ed. New York: Oxford University Press.
- Sheldon, Kennon M. 1995. "Creativity and Self-Determination in Personality." *Creativity Research Journal* 8 (1): 25–36.
- Sheldon, Kennon M. and Bruce Biddle. 1998. "Standards, Accountability, and School Reform: Perils and Pitfalls." *Teachers College Record* 100 (1): 164–80.
- Shenton, Andrew K., and Pat Dixon. 2003. "Models of Young People's Information Seeking." *Journal of Librarianship and Information Science* 35 (1): 5–22.
- Silverman, David. 2004. *Qualitative Research: Theory, Method and Practice*, 2<sup>nd</sup> ed. Thousand Oaks: Sage Publications.
- Starko, Alane Jordan. 2014. *Creativity in the Classroom: Schools of Curious Delight*, 5th ed. New York: Routledge.
- Vansteenkiste, Maarten, et al. 2005. "Experiences of Autonomy and Control among Chinese Learners: Vitalizing or Immobilizing?" *Journal of Educational Psychology* 97 (3): 468–83.

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