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Summer Camp as a Force for 21st Century Learning: Exploring Divergent Thinking and Activity Selection in a Residential Camp Setting

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Abstract

This study investigated change in divergent thinking (DT), an indicator of creative potential, at 2 gender-specific residential summer camps. Additionally, this study examined whether the change in DT varied by gender and by the type of activities campers self-select. Quantitative methods, using a quasi-experimental design was used in order to understand differences in camper scores. A total of 189 youth, 100 girls, 89 boys, between the ages of 9 and 14 years participated in the current study. Participants were administered a modified version of Guilford's (1967) alternate uses task, a measure of DT, in which respondents were asked questions such as name all of the uses for a brick or name all of the uses for a plate before the camp session started, and then again at the end of the two-week session. Results indicate overall mean significant increases in DT across all scoring methods of fluency, flexibility, and originality. Participants who self-selected 1 or more artistic activities (e.g., drama, arts and crafts, dance) had significant increases on the tasks as opposed to participants who did not select any artistic activities (e.g., basketball, baseball, archery). Finally, girls significantly increased across all scoring methods, whereas boys slightly increased in fluency and flexibility but not in originality. These results indicate residential summer camp may provide a creativity "benefit" for youth in attendance, especially those who participate in certain activities. Practitioners should use this study to understand their own programming in terms of creativity, activity offerings, and camp culture.

Key words: divergent thinking, creativity, summer camp, activity selection

Introduction

Imaginative free play, openness to experience, confidence in abilities, time spent in natural settings, and self-efficacy beliefs are some key ingredients that help promote creativity and creative problem solving (Atchley, Strayer, & Atchley, 2012; Brown & Vaughan, 2009; Feist 2010; McCrae, 1987; Russ, 2014). In order to meet the complex demands of a dynamic, fast-paced society, people are required to think and act in creative ways. This is true for people young and old, those in school or in the workplace. As the importance of creativity grows, research has found that it does not occur "within in a vacuum," but spans across different cultures and societies (Lubart, 1999, p.339), and regardless of whether creativity is innate, learned, or both, a large body of research suggests that creativity can be enhanced (Plucker, Kaufman, & Beghetto, 2015).

Despite the increased attention being paid to creativity, traditional school settings, in which high stakes testing, standardization, and rote memorization are favored, are not effectively preparing youth to develop their own creativity, which is a key component for 21st century problem solving (Robinson & Aronica, 2015; Starko, 1995). Creativity, imagination, and free play (recess) have been minimized in many traditional schools, which restricts children's ability to express themselves, and ultimately inhibits creative thinking and imagination (Russ, 2014).Research on creativity reflects this change. Creativity, specifically divergent thinking, has been on the decline in the United States since 1990, based on results from thousands of Torrance Tests for Creative Thinking (TTCT), (Kim, 2011). Organizations such as the Partnership for 21st Century Skills are now starting to promote the need for youth and adults to have "the ability to produce and implement new, useful ideas . . . [to leverage] knowledge success and increasing quality of life" (Plucker et al., 2015, p. 1). Summer camp may provide an optimal, out of school, informal educational option for youth to enhance and develop their own creativity.

Within the past decade, a number of research studies have reported that summer camps produced positive social outcomes for both youth and adults. These outcomes include, but are not limited to, developing friendship skills, improved positive identity, increased self-esteem, self-actualization for gifted students, thoughtful decision making, and the ability to connect with others (Cartwright, Tabatabai, Beaudoin, & Naidoo, 2000; Garst & Bruce, 2003; Henderson, Bialeschki, & James, 2007; Thurber, Scanlin, Scheuler, & Henderson, 2007). Campers have the capacity to form lifelong friendships, create new social groups outside of school, and develop

lifelong skills for their future (Henderson et al., 2007). Despite these outcomes, few studies have specifically sought to investigate creativity and divergent thinking in settings such as summer camp (Goor & Rapoport, 1977).

Previous research on creativity suggests that having choice and opportunities to try different things enhances creativity and imagination (Amabile & Gitomer, 1984; Russ, 2014). Additionally, the introduction of novelty and creativity is more accurately understood within a systems or multidimensional approach that considers person, culture, society, and context (Csikszentmihalyi, 1999). A systems approach may explain the interactions that exist within the culture and activities at camp, between and among campers, staff members, parents, and director. This view helps to explain the camp culture in relation to creativity, instead of purely viewed subjectively, or held as a 'special trait' by an individual (Plucker, Beghetto, & Dow, 2004). In other words, the dynamic social conditions at camp make it a viable setting to investigate creativity.

In the United States, summer camp is an 18 billion dollar industry that provides 14 million youth and adults with a wide variety of recreational activities (American Camp Association, n.d.). These activities may include sailing, arts and crafts, photography, woodworking, camp craft, hiking, archery, among many others. Often located in natural settings, away from parents, grades, timetables, and certain technologies, the features of summer camp provide an ideal location to investigate outcomes related to creativity. Additionally, many summer camp professionals value the importance of 21st century skills, as part of the camper experience and the camping industry as a whole. The American Camp Association (ACA) national board of directors created a work group to focus on skills learned at camp, one of which is creativity (Sheets, 2013). Subsequently, the 2016 ACA national conference hosted psychologist Scott Barry Kaufman as its keynote speaker to discuss the importance of creativity and summer camp.

Due to the wide variety of activities, summer camp provides youth with an interactive environment that may promote creativity. Sheets (2013) asserts that summer camp is an ideal place for children and youth to stretch their minds and act creatively in a nonacademic setting. This study aimed to explore creativity, specifically divergent thinking, as a salient feature of summer camp.

Theoretical Foundation

The definition of creativity adopted for this paper takes into account the importance of social context and the environment, as paramount factors needed to understand creativity. Summer camp exhibits features of shared experience and communal living, which fit well with the current definition of creativity.

Plucker et al. (2004) explain creativity as "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).

A key component of creativity, and more specifically creative problem solving, is divergent thinking (DT). DT is the cognitive process of developing multiple responses to open-ended questions (Kaufman, Plucker, & Baer, 2008). Conceptualized and developed by the creativity field's pioneering researchers J.P Guilford and Paul Torrance, DT has been linked to certain personality traits such as openness to experiences, extraversion, and risk taking (Feist, 2010; McCrae, 1987).

DT is associated with broad ideas and many responses, or associations to a problem (Russ, Robins, & Cristiano, 1999). Being able to produce more ideas and responses to complex problems is a valued trait in society, in both school and out-of-school settings (Plucker, Kaufman, & Beghetto, 2015; Russ, 2014). DT is independent of intelligence (based on IQ) and has a sense of fluidity of thinking (Runco, 1991).

One example of DT would be producing solutions to complex problems such as creating efficient modes of transportation, methods to provide natural disaster relief, or innovations in medicine and technology. Once an individual or group exhausts possible DT solutions, they may utilize convergent thinking, in which they arrive at the best or most appropriate solution to a problem that can be used in practical ways (Cropley, 2006). Guilford (1967) hypothesized that fluency, flexibility, originality, and elaboration of ideas are the best indicators of divergent production, and a means of quantifying responses considered creative.

Guilford's (1967) structure of intellect model (as cited in Baer, 2014) explains divergent thinking using four categories.

- Fluency is the ability to produce a large number of ideas. Represented by the sheer number of responses on a divergent thinking task.

- Flexibility is the ability to produce a wide variety of ideas. Represented by the number of categories of responses.
- Originality is the ability to produce unusual ideas. Represented by the statistical infrequency of responses in a sample.
- Elaboration is the ability to develop or embellish ideas. Represented by the degree to which a response is detailed or elaborate (p. 14)

Purpose

Past studies assess divergent thinking in school and various workplace settings. However, no known studies have directly assessed divergent thinking among participants at a residential summer camp. The purpose of this study was to investigate the change in camper fluency, flexibility, and originality, measures of divergent thinking (DT), in a traditional residential camp setting over a 2-week program. Additionally, this study examined whether the changes in DT varied by gender and by the type of activities campers self-select.

Research Questions

1. Is there significant difference in divergent thinking before and after attending a 2-week summer residential camp?
a. Do these differences differ based on camp/gender?
b. Do these differences differ based on the type of activity the campers self-select (i.e., artistic based, non-artistic based)?

Methods

Setting

Data were collected at two residential summer camps in New England during the summer of 2014. Both camps reside on 200 acres of rural property, but are run separately, as different programs, with individual camp directors. Neither explicitly markets creativity as an outcome of their programs, but both promote a holistic, traditional camp experience for participants. The programs are gender-specific, where traditions and activities vary between the girls' and boys' camps. Some activities are offered at both camps, while others are offered only at one camp. For example, both camps offer sailing and woodshop, whereas only the girls' camp offers dance

(See Table 1). Activities that overlap are taught by camp-specific instructors for example the boys' camp and the girls' camp each have a newspaper instructor.

Activity description

Camp activities were predesignated by the researchers as being either "artistic" or "non-artistic" based on programmatic elements. Activity designation was based on the degree to which the activity was arts-based or non-arts-based. For example, arts and crafts was designated as an artistic activity because a participant was able to create something new, and allowed the freedom to customize the final product, whereas basketball, a rule-based activity, was designated as non-artistic because participants did not create anything per se, and tended to have a lower degree of freedom to decide the outcome of the program. To further clarify, woodworking was designated as an artistic activity because, similar to arts and crafts, participants had freedom in what they could create, whereas archery was designated a non-artistic activity type because it involved similar tasks during each program. Many of the arts-based programs are connected to the larger camp community; projects created during class were used for a variety of purposes. For example, photography participants display their work in the camp dining halls and the *best photo award* was given to a camper at the end of each 2-week period.

Both programs market themselves as a traditional camp experience in which campers participate in a variety of activities. However, differences exist in activity offerings between camps (Table 1). The girls' camp offers 10 arts-based activities whereas the boys' camp offers seven. The girls' camp offers 10 non-arts-based activities whereas the boys' camp offers 13 non-arts-based activities. Participants are provided with decision-making autonomy regarding their activity selection. On the first full day, these camps allow participants to choose activities for the duration of the 2-week program. Autonomy supportive camps allow choice, opportunities for risk taking, and are supportive of decision making (Ramsing & Sibthorp, 2008). These features provide an ideal context to foster and develop creativity.

Activity offerings

Table 1. Differences between Camp Programs Based on Artistic and Non-Artistic Activities

Girls art-based	Boys art-based	Girls non-art-based	Boys non-art-based
Woodshop	Woodshop	Sailing	Sailing
Drama*	Drama*	Archery	Archery
Music*	Photography*	Riflery	Riflery
Leatherwork	Camp craft	Ball Games	Soccer
Photography*	Leatherwork	Soccer	Basketball
Newspaper*	Newspaper*	Canoe/Kayak	Baseball
Dance*	Music*	Swimming	Canoe/Kayak
Nature		Ropes course	Swimming
Ceramics*		Horseback	Ropes course
Arts and crafts*		Waterskiing	Frisbee
			Fitness
			Horseback
			Waterskiing

*Activity has culminating activity connected to the larger camp community

Measures and Coding

A modified version of Guilford's Alternate Uses Task (1967) was used at the beginning and end of the 2-week session to assess three components of divergent thinking: camper fluency, flexibility, and originality. Using a test-like format, participants were given 6 minutes to list as many possible uses for common objects. Examples of such items included: a brick, a paperclip, a newspaper, and a plate. The researchers created all items for both pre- and post-camp assessments.

The responses were coded using three components: (a) fluency, number of responses; (b) originality, statistical infrequency of response; and (c) flexibility, number of categories of

responses. Cronbach's Alpha indicated a high percentage of inter-rater agreement between .856 and .905 reliability ($p < .005$) for flexibility scores. Inter-rater agreement was not needed for fluency or originality, because scores are based on sheer number of responses and statistical infrequency, respectively. Participant responses were matched and summed by researchers in order to determine fluency and originality scores.

Data Analysis

Quantitative methods using a quasi-experimental design were used for this study. Analysis of variance using the most recent version of SPSS was used to determine variation of divergent thinking scores from pre- to post-camp test. Mean divergent thinking scores were compared to gender, and whether or not a camper self-selected an artistic or non-artistic activity. A total of 189 campers participated in this study (mean age = 11.9, SD = 1.62); 100 girls and 89 boys. 61% of participants were between the ages of 11 to 13 years old. 90.3% of the sample consisted of Caucasian children. 40% of campers were in their first year of camp, while 59.3% had been at camp for 2 or more years.

Results

Overall results indicate significant mean increases for the components of divergent thinking from the beginning of the 2-week session to the end (Table 2). Overall, fluency and flexibility significantly increased, moreso than originality. This increase indicates that campers produced more responses (fluency) and more categories (flexibility) of responses from pre- to post-camp. However, not as many original responses were recorded, which are determined by the statistical infrequency of a response within the sample. Differences in DT were also investigated based on camp and gender, and by activity type.

Table 2. Descriptive Statistics for Divergent Thinking and Activity Type (*N* = 189)

Divergent thinking	**Mean (s.d.)**
Fluency pre test	11.640 (5.110)
Fluency post test	13.547 (6.268)**
Flexibility pre test	4.978 (1.680)
Flexibility post test	6.425 (1.991)**
Originality pre test	0.815 (0.830)
Originality post test	1.174 (1.361)
Artistic activity	**Mean (s.d.)**
Average number of artistic activities per youth	0.979 (0.928)
Artistic activity participation percentage[a]	62.9%

[a] 119 of the 189 campers indicated that they took part in one or more artistic activities.

*$p < .05$, **$p < .01$, ***$p < .001$

Gender results

There were significant differences between campers at the boys' and girls' camps across the three measured aspects of DT. Boys significantly increased in flexibility and slightly in fluency but not in originality (Table 3). Girls increased across all categories (fluency, flexibility, originality). On average girls had higher pre-test scores than boys' post-test scores (Table 3). Girls produced more responses and a higher degree of categories of responses than boys (Table 3, fluency and flexibility). Overall, 83% of girls self-selected artistic activities, whereas 40% of boys self-selected artistic activities. The selection of more artistic activities by girls may be due in part to the specific culture of each camp, and the hiring practices of each camp director. One explanation of gender differences is that perhaps over time the girls' camp promoted artistic activities and therefore hired more specialized staff.

Table 3. Pre- and Post-Camp Differences in Divergent Thinking by Gender/Camps

Divergent thinking	Male *n* = 89	Female *n* = 100
Fluency pre test	10.741 (5.527)	12.440 (4.588)
Fluency post test	11.550 (6.363)	15.325 (5.642)***
Flexibility pre test	4.494 (1.626)	5.410 (1.846)
Flexibility post test	5.651 (1.869)	7.115 (1.846)***
Originality pre test	0.8034 (0.858)	0.825(0.808)
Originality post test	0.989 (1.346)*	1.340 (1.359)***

*$p < .05$, **$p < .01$, ***$p < .001$

Activity Selection Results

Campers, who self-selected to participate in one or more artistic activities had on average more responses (fluency), as well as more categories (flexibility) of responses, from pre-camp to post-camp. Additionally, these campers produced on average more original responses from pre-camp to post-camp. In summary, campers who participated in one or more artistic activity had statistically significantly increases in all divergent thinking scores (Table 4, one or more artistic activity).

Campers who did not participate in any artistic activities had increases in fluency and flexibility, but not in their originality score (Table 4). Additionally, fluency scores for campers who did not choose any artistic activities did not have as significant increases as campers who chose one or more artistic activities (Table 4). This means that campers who did not choose any artistic activities did not produce as many responses to the DT prompts as campers who took one or more artistic activities. Additionally, campers who did not take part in any artistic activities had similar pre-camp and post-camp originality scores. This means that their responses on the DT tasks did not yield a significant increase in originality.

Table 4. Pre- and Post-Camp Differences in Divergent Thinking by Creative Activity Participation

Divergent thinking	Artistic activity *n* = 119	No artistic activity *n*= 70
Fluency pre test	11.47 (4.82)	11.92 (5.59)
Fluency post test	13.77 (6.34)***	13.16 (6.17)*
Flexibility pre test	5.53 (1.99)	5.07 (1.68)
Flexibility post test	6.17 (2.34)***	6.32 (1.98)***
Originality pre test	0.76 (0.78)	0.91 (0.91)
Originality post test	1.23 (1.32)***	1.09 (1.44)

*$p < .05$, **$p < .01$, ***$p < .001$

Discussion

Following two weeks of traditional residential summer camp, DT scores increased significantly across all three categories of divergent thinking. Additionally, there was a significant gender difference in DT scores, with girls on average increasing from pre- to post-camp more than boys. Finally, differences were noted based on the types of activity (artistic v. non-artistic) the campers self-selected. These factors lead the authors to believe there is an overall creativity "benefit" for youth in a residential camp setting, which could be explained by a number of features of the camp experience.

The core features of these traditional summer camps may explain some of the variation in DT (Amabile & Gitomer, 1984; Goor & Rapoport, 1977; McCrae, 1987; Thomas & Berk, 1981). Some of these features include the ability to participate in a variety of activities, new experiences, and opportunities for adventure and exploration. Furthermore, camps are typically located in natural settings, which may instill a sense of creativity among participants (Atchley et al., 2012).

The results of this study further point to the importance of processes (activities) and context (summer camp) that Plucker et al. (2004) describe in their definition of creativity. Camp provides a communal environment, which also relates to a system view of creativity, in which the person, environment, and setting are connected in order to have the capacity to adopt new ideas (Csikszentmihalyi, 1999). The average increase in DT scores may show how environment, activities, and gender play a role in camper creativity.

Counter to previous DT research, which suggests that consistent differences do not exist between boys and girls, in the camp settings studied here there were significant differences on fluency, flexibility, and originality (Baer & Kaufman, 2008). This gender difference may be due to the nature of the programming at the specific camps. The girls' camp, in this instance, offered more artistic-based activities than the boys' camp (Table 1). These results suggest that activity selection does have an impact on DT, especially based on the gender of the camper. There were some small differences, if a camper took one or more of the predesignated artistic activities.

Both camp programs provide traditional activities, however, the girls' camp offers additional artistic activities including arts & crafts, newspaper, dance, and nature that are not offered by the boys' program. The increased artistic offerings may be one factor that helps explain enhanced ability of girls to practice and exercise DT over the two-week period. One implication of the girls' camp offering more artistic activities is that the camp director must hire specialized staff that are able to teach activities such as arts and crafts, dance, and nature. The boys' camp director must hire counselors who are skilled in teaching competitive-based activities that may not be taught as artistic, such as basketball, ultimate Frisbee, baseball, and soccer. Increases in DT can be further explained by looking at features of the camps and differences between programs

Implications: How Can Camps Increase the DT of Campers?

The features of camp

Autonomy Supportive Camps and Creativity

If one of the objectives of camp programming is to foster creativity among campers, increasing the level of autonomy is critical (Ramsing & Sibthorp, 2008; Hill & Sibthorp, 2006). Features of an autonomy supportive camp include: instructional style used by leaders, which can be either camper- or leader-centered; characteristics of program areas which may include differences in

type of activity such as sports, games, athletics, and the arts; and overall cultural attitudes of the specific camp (e.g., competitive or noncompetitive). Ramsing and Sibthorp (2008) assert that "an autonomy supportive camp is one that creates a context or environment that provides choices within limits, freedom, encouragement toward autonomy," and involvement with decision making (p. 66). Creativity is supported when people feel a sense of ownership and autonomy in their life and work without rigid structure or judgement (Gagne & Deci, 2014; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). Overall increases in DT may be due in part to the camp cultures that support camper decision making and choice. Autonomy supportive characteristics relate to past studies on residential camp in which participants are provided opportunities for adventure and exploration, independence, and leadership (Thurber et al., 2007). It is possible that an autonomy supportive camp allows participants to exercise their own divergent thinking and creativity.

Novelty and Utility

Novelty and utility are essential components of creativity (Plucker et al. 2004). Residential camp is a 24-hour program where campers typically experience activities such sailing, performing a skit, or interacting with someone from a different country for the first time. Additionally, divergent thinking has been linked to openness to new experiences (McCrae, 1987). Novel activities may provide opportunities for divergent thinking throughout the camper's experience. The utility component of creativity relates to artistic activities that are connected to the camp culture as a whole (Table 1). In other words, many arts-based programs have culminating projects that are connected to the larger camp community. For example, at the girls' camp, arts and crafts participants plan an art show at the end of the 2-week session to display camper work. As part of the newspaper class, campers interview staff and create stories or word puzzles for others to read during meal times. The connection between program (arts and crafts) and larger camp culture (all camp arts show, newspaper) represents utility value for those programs. The novelty and utility of programs and culture at camp provide an explanation for increases in divergent thinking.

Creativity across Domain

According to Plucker & Beghetto (2004) creativity moves across domains, so campers may be absorbing creativity beyond specific activities and from the camp experience as a whole. "The optimal condition for creative production is a flexible position somewhere between generality [camp experience] and specificity [specific activity]" (Plucker & Beghetto, 2004, p. 161).

Therefore, domain specific tasks, such as arts and crafts, may be connected to the larger general domain of camp experience. Due to the connectivity of program and larger camp culture, summer camps may potentially encourage creativity across domains. Although more research is needed, camp may promote what Plucker & Beghetto (2004) describe as a hybrid position, in which perspectives are valued from other domains but at the same time "[acknowledge] the value of expertise and task commitment" (p. 161). A hybrid position may lend itself to a renaissance-type educational setting in which the development of "multicreative" people are valued.

Creative Leisure

Camp may enact "creative leisure" for participants, in which freedom and intrinsic desire are experienced (Hegarty, 2009). Creative leisure experiences are intrinsically motivated and relate to the theory of flow, in which a participant is fully immersed and engaged in an activity. During this type of leisure experience, challenge is balanced within a person's skill level and time seems to not matter (Csikszentmihalyi, 1990; Csikszentmihalyi & Rathunde, 1993; Hegarty, 2009). Camp provides opportunities for participants to experience creative leisure through freedom, exploration, and diverse activity offerings. Creative leisure and the camp culture is one explanation for increases in camper divergent thinking.

Natural Setting

One study found a 50% increase in creativity among participants after an Outward Bound wilderness expedition. The increase was associated with immersion in natural settings, away from distractions associated with media and technology (Atchley et al., 2012). Participant creativity improved in natural settings, and was linked to a lack of readily available technology. Most summer camps do not allow interaction with online technology or media, but instead require face-to-face interaction and communication. The lack of readily available technology at camp may lead to campers being more creative and engaged in designing their own distractions. Although not directly investigated, the natural setting, and lack of readily available technology, could contribute to overall increases of DT.

Gender differences

Specialized Staff

The girls' camp offers more arts-based programming than the boys' camp. As a result, the girls' camp director must hire specialized staff to teach activities such as arts and crafts, dance, and ceramics. Specialized staff may help add to a larger creative camp culture that spans beyond individual programs. Staff who teach arts-based programs also perform job responsibilities in the camper cabins, during meal times, and for larger events such as skit nights or campfires. Simply hiring specialized staff will not guarantee increased creativity. Along with the specific area knowledge, staff need to encourage opportunities for creative expression amongst campers.

Activities with Connection

For the current study, arts-based programs are typically connected to the wider camp community. In other words, one feature of arts and crafts is that at the end of each session the girls' camp hosts an art show in which camper work is displayed. Furthermore, the dance program hosts a dance show at the end of the session. The linkage between arts-based programs to the wider camp community is not a feature of non-arts-based programming such as basketball, baseball, or sailing. Programmatic differences help explain how valuable creativity is between the boys' and girls' camp.

Activities Offered

Due to the discrepancy between activity offerings, there is more choice for girls to self-select arts-based activities. The arts-based activities may provide more choice of materials within their programs. For example, arts and crafts, ceramics, and woodshop provide a variety of materials, whereas basketball, baseball, and Frisbee do not. Additionally, during arts-based programs, campers typically create something to take home, which helps provide more utility for specific programs. Prior studies show that having more choice in materials (as opposed to being assigned) led to products that were judged as being more creative (Amabile & Gitomer, 1984). Through arts-based programming, the girls' camp may provide more opportunities for divergent thinking and creativity.

Historical Underpinning

In the United States, gender plays an important historical role in the camping industry. Early camps, in the 1870's and 1880's, were exclusively for boys, and provided a "potent antidote to the feminized homes that threatened to undermine American manliness" (Van Slyck, 2006, p. 24). Away from modern urban life and technology, camps originally sought to "toughen" boys through sports, hiking, and activities associated with outdoor survival. Camps had a "militaristic feel", and were very structured (Van Slyck, 2006, p. 24). "When girls first entered the camping industry the experience promoted self-confidence, independence, and an active life beyond the home" (Van Slyck, 2006, p. 24). Historical differences could be one explanation for differences in activity offerings and value placed on arts-based programming between the boys' and girls' camps (see Table 1).

Conclusion

Camp culture, activity offerings, and differences between program help explain increases in divergent thinking. The differences in activity offerings and cultures between camps is similar to what Plucker & Beghetto (2004) describe as a hybrid position, in which the girls' camp may value creativity across domains. For the current study, girls had larger increases in overall DT, leading the researchers to believe the culture and teaching between camps differed. The girls' camp offered more arts-based programs and this difference may spill over to the larger camp culture through hiring specialized staff and valuing flexibility in programming.

Many arts-based programs connect to the larger camp community and therefore may provide utility and creative value for participants. Gender differences may prompt boys' camp directors to consider incorporating arts-based programs or ways to add a 'creative twist' to some activities. Teachers of non-arts-based programs could find ways to have culminating activities or more flexible approaches that connect to the larger camp culture.

Incorporating creativity during staff training and hiring practices could be one way to enhance the value of divergent thinking and creativity among campers and staff alike. Both boys' and girls' camp directors should consider creativity when hiring and training staff. To do this, directors should incorporate questions related to creativity for their interview process. Some questions could be: *What are ways you could make basketball a creative activity* or *In what ways can you help camp be more creative?* These questions may require staff to think divergently and be flexible in their approach to teaching across domains.

During staff training, leadership staff should implement workshops and training related to creativity and divergent thinking. In what ways could you make basketball, a seemingly non-arts-based program, be more creative? How do you create a camp that provides more autonomy in order to promote intrinsic desire and motivation for participants? Staff training should point out that a large body of research shows that creativity can be enhanced and therefore incorporated into all facets of the camp experience. Camps should question their own cultures and how they teach, embrace, and promote creativity, a 21st century skill.

The camps in the current study did not promote creativity as an outcome of their program. Camps that have creativity more ingrained in their mission and values, who place more programmatic emphasis on developing DT, may see more significant increases in DT amongst their campers.

Limitations and Future Directions

The current study represents a sample of two camps, suggesting more research should include different types of camps (e.g., gender inclusive camps, day camps, sports camps, and music camps). This study lays a foundation for future studies that address DT in residential camp settings. Future studies should also incorporate a control group of youth who could have attended camp, but did not. A sample of children who attend day camp or summer school could be an ideal control group for future studies.

The researchers assigned activities as either being arts-based or non-arts-based largely due to the perceived features of the activities. There may be pedagogical differences among counselors who teach arts-based versus non-arts-based activities. More research is needed in order to understand the pedagogical differences of teachers between activity types. Additionally, it would be important to understand how activities are connected to the larger camp culture and whether (or not) this connection is valued in relation to creativity.

No known studies empirically investigate creativity, a 21st century skill, in a residential camp setting. The current study aimed to explore how the features of camp and the activities offered impact camper divergent thinking over a 2-week time period. More research is needed to understand how staff perceive this type of work environment in terms of their own creativity. Most camp staff are emerging adults, between the ages of 18 and 25 years, which is a key developmental stage for identity formation (Arnett, 2000). Exploring staff outcomes, in terms of

creativity and staff training, may help to explain and understand camper experiences. Exploring DT, as an outcome of residential summer camp, could benefit professionals and leaders to show how 21st century skills are salient features of camp.

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