Youth, the Outdoors, and Media: Awakening and Strengthening the Connection of Urban Youth to the Land

Project Overview and Review of Literature

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— *Introduction* —

For over 100 years the United States Department of Agriculture Forest Service (USFS), has managed public lands for a variety of uses including recreational, scientific, and conservation pursuits. Established in 1905, the agency's mission is to "sustain the health, diversity and productivity of the Nation's forests and grasslands to meet the needs of present and future generations" (http://www.fs.fed.us/aboutus/mission.shtml). To this end, the USFS remains committed to understanding and meeting the diverse needs of the public—including children and youth.

The USFS consistently seeks new ways to engage young people with the outdoors to connect them with healthy activities; inspire curiosity about nature and the environment; create new education and career opportunities; and instill in our nation's youth an understanding of, and appreciation for, public lands. As a result, the USFS collaborates with numerous federal, state, and local agencies (public, private and non profit) to develop a variety of programs that will create an awareness of public lands and promote the use of these spaces. Additionally, they provide millions in funding for various national initiatives and programs, including in urban areas. Examples of youth initiatives include: More Kids in the Woods, Children's Forest Network, Nature Watch, and America's Great Outdoors: Developing the Next Generation of Conservationists. Many of these programs occur on public lands and provide opportunities for recreation and hands-on learning about the environment and natural resources; yet some involve youth in community-based outdoor activities such as participating in a community garden or playing outside, while others engage young people in online spaces to explore ideas, images and activities relevant to the natural world.

The USFS has dedicated numerous resources to youth initiatives (both financial and in-kind) while striving to reach young people from rural, suburban, and urban areas of the country. There is evidence that in the last five years, collaborative efforts to get youth outdoors have been successful. Data from the 2009 National Kids Survey conducted by the USFS, for example, showed that 40% of children and youth spent more time in the outdoors than they did the year before (Larson, Green, & Cordell, 2011) with youth reporting spending at least two hours outside every day during the week and more on weekends (Betz, 2012). The Children and Nature Network report the number of "youth getting outdoors in nature" increased from one million in 2009 to three million in 2011 (C&NN, 2012). In addition, the 2012 Outdoor Foundation's annual Outdoor Recreation Participation report showed outdoor recreation in the United States reached its highest participation in five years with more children, youth and young adults getting outdoors then in previous years (Outdoor Foundation, 2012).

Despite this increase in participation, research suggests urban youth are not enjoying public lands and outdoor spaces as frequently, or utilizing them in the same ways, as their rural and suburban counterparts (Breaking Barriers, 2012). Furthermore, there is evidence to suggest constraints on visitation to parks and open spaces are influenced by race, ethnicity, income, as well as other cultural factors (Outdoor Foundation, 2012; Zanon, Doucouliagos, Hall & Lockstone-Binney, 2013). In California, 37% of youth surveyed by the Bay Area Open Space Council reported visiting an open space park only a few times each year and described a variety of barriers to accessing and utilizing outdoor spaces (BAOSC, 2010).

— Understanding Urban Youth through Media & Communications —

In 2013, the USFS contracted with San Francisco State University (SFSU) to explore this phenomenon. The purpose of the study is to understand whether or not, and how, the outdoors is relevant, interesting, and meaningful to urban youth; and subsequently identify the kinds of messages that might inspire this population of young people to spend more time outside. Additionally, the USFS is interested in identifying forms of media that will effectively deliver these messages to young people in urban settings. The research question that guides this project is, how can the USFS effectively use media to connect urban youth with public lands?

To answer this question, a multi-disciplinary research team was assembled at SFSU and a collaboration was formed with Bayview Hunters Point Center for Arts and Technology (BAYCAT). BAYCAT is a non-profit social enterprise that provides digital media arts programming to youth and young adults from historically under-resourced neighborhoods in San Francisco and around the Bay Area. This collaboration allows our team to engage with urban youth and listen to their ideas about what motivates and inspires them to spend time in the outdoors. It also creates an opportunity for young people to be producers of media and messages intended for their peers and other youth. In this study, youth from BAYCAT developed and created videos which were then viewed by groups of young people

in two other Bay Area cities (i.e., Richmond and Oakland). Youth exposed to these media had an opportunity to share their insight and perspectives about the effectiveness of the media and messaging, and discuss images and concepts that motivate them (or not) to venture outdoors.

In this document, we outline a framework for this project by reviewing and discussing key components of the literature from three distinct fields of study. First, we review what is known empirically about youth participation in outdoor activities and emphasize research that highlights California youth perspectives. Next, we present aspects of communication theory to demonstrate the value of a media campaign produced by youth, for youth. Third, we discuss how youth are using media and the modes that are trending or most popular for young people in the U.S. Given the scope of literature published across these fields, our review focuses on documents published between 2000 and 2014, and our discussion is delimited to peer reviewed journal articles, research-based books, formal reviews of research, and research and evaluation reports from federal and privately funded entities. For example we chose to highlight findings from reports published by the USFS, The Outdoor Foundation, Pew Research Center, and The Nielsen Company. These organizations conduct studies with large national samples and the results shape industry and national discourse about the outdoors and media.

— Youth and the Outdoors —

Engaging young people in the outdoors has positive implications for people, society and the planet. This section includes youth participation in outdoor activities, benefits of participation in outdoor pursuits, and sample constraints and barriers reported by youth as aspects in their lives preventing them from experiencing the outdoors more often or at all.

Recent studies indicate youth participation in the outdoors is on the rise. According to a 2011

national survey conducted by the Outdoor Foundation (approximately 38,000 U.S. respondents), youth ages 6 to 17 averaged 81 outings annually while young adults, age 18 to 24 averaged 97 outings. In this sample, the most popular activities for American youth (ages 6-24) were cycling, jogging/running, front country camping (e.g., backyard, car/RV), fishing and hiking. Results revealed the primary motivators for young people to be outside included being with friends and family, and to exercise (Outdoor

Foundation, 2012). These findings complemented results from the 2009 National Kids Survey (approximately 1,450 youth sampled) that indicated "hanging out" was the most popular outdoor activity amongst youth followed by sports, using electronic media, and nature-based activities such as camping and fishing (Larson et al., 2011).

These two national studies with large samples are positive indicators that youth are getting outdoors; however, findings also suggest the definition of outdoor recreation is expanding to include activities not typically thought of as ways to spend time in natural settings. For example young people are increasingly drawn to engage with technology in outdoor spaces and report listening to music, watching videos and enjoying other electronic media while outside (Chavez, 2009; Larson et al., 2011).

Benefits of Participation: The Sky's the Limit

Spending time outside, playing or engaging with nature, can benefit young people in numerous ways; scholars continue to map how outdoor-based play and interaction with the natural world are essential to positive youth development (Maniella, Agate, & Clark, 2011). Participation in outdoor activities has been linked to higher levels of physical activity and improved physical and mental health (Barton & Pretty, 2010; Bedimo-Rung, Mowen, & Cohen, 2005; Maller, Townsend, Pryor, Brown & Leger, 2005).

Studies also show youth who play outside may experience decreased levels of aggression, anxiety, and depression (Burdette & Whitaker, 2005; Ginsburg, 2007). It has also been shown to support cognitive function. Faber Taylor and Kuo (2009) found spending time in the natural world helped youth diagnosed with Attention Deficit and Hyperactivity Disorder (ADD/ADHD) strengthen their ability to focus attention and to sustain concentration; while other researchers found playing outdoors promoted creativity and increased problem solving and critical thinking skills amongst youth (Athman & Monroe, 2004; Burdette & Whitaker, 2005). Studies also reveal young people who participated in outdoor education programs demonstrated increased self-esteem and improved achievement in academic subjects such as reading, math and science (American Institutes of Research, 2005; Coyle, 2005).

In addition to the benefits experienced by individual youth, early exposure to the natural world can foster responsible stewardship of the Earth and encourage the development of a global citizenry. Interacting with nature helps young people develop knowledge, values, and attitudes that have a positive impact on pro-environmental attitudes and practices (Chawla, 2009); this can lead to the development of a conservation ethic and increased support for, and protection of, parks, open spaces and public lands (Asah, Bengston, & Westphal, 2012).

As showing care for the land is vital no matter what age, Metz and Weigel (2011) reported youth who had meaningful personal experiences in nature were more likely to express concern about environmental issues (e.g., global warming, air/water pollution), self-identify as a "strong environmentalist," and to express interest in studying the environment in college or pursuing a career related to the natural world. Wells and Lekies (2006) found childhood participation in outdoor activities such as playing in the woods or caring for plants and trees can have a positive relationship to adult environmentalism, while James, Bixlar, and Vadala (2010), showed cumulative experiences in the outdoors, that start in childhood and continue through young adulthood, may lead individuals to choose a career requiring knowledge of the natural world.

Researchers agree there is a positive relationship between being outdoors and the health and well being of youth. In addition, exposing young people to nature can have implications for the future of conservation. This fact notwithstanding, not all youth participate equally. The variety of participation patterns and preferences fluctuates greatly.

Variation in Participation: No One Size Fits All

Studies indicate there are differences in participation based on a variety of factors including race and ethnicity, gender, geography and income. Research shows racially and ethnically diverse youth, for instance, are under-represented in outdoor recreation with participation remaining lowest amongst youth who identify as African American (See Figure 1). Additionally, while rates of participation across gender have become more equal over the years, males still engage in outdoor activities more frequently than females. And, geographically, youth in the Western and Mountain states are more likely to spend time in the outdoors than their counterparts in other parts of the country (Larson et al., 2011; Metz & Weigel, 2011; Outdoor Foundation, 2012). Furthermore, evidence suggests outdoor participation is highest amongst youth from households with higher annual incomes, defined by the Outdoor Foundation as $75,000 or above (Mowen, Payne, & Scott 2005; Outdoor Foundation, 2012).
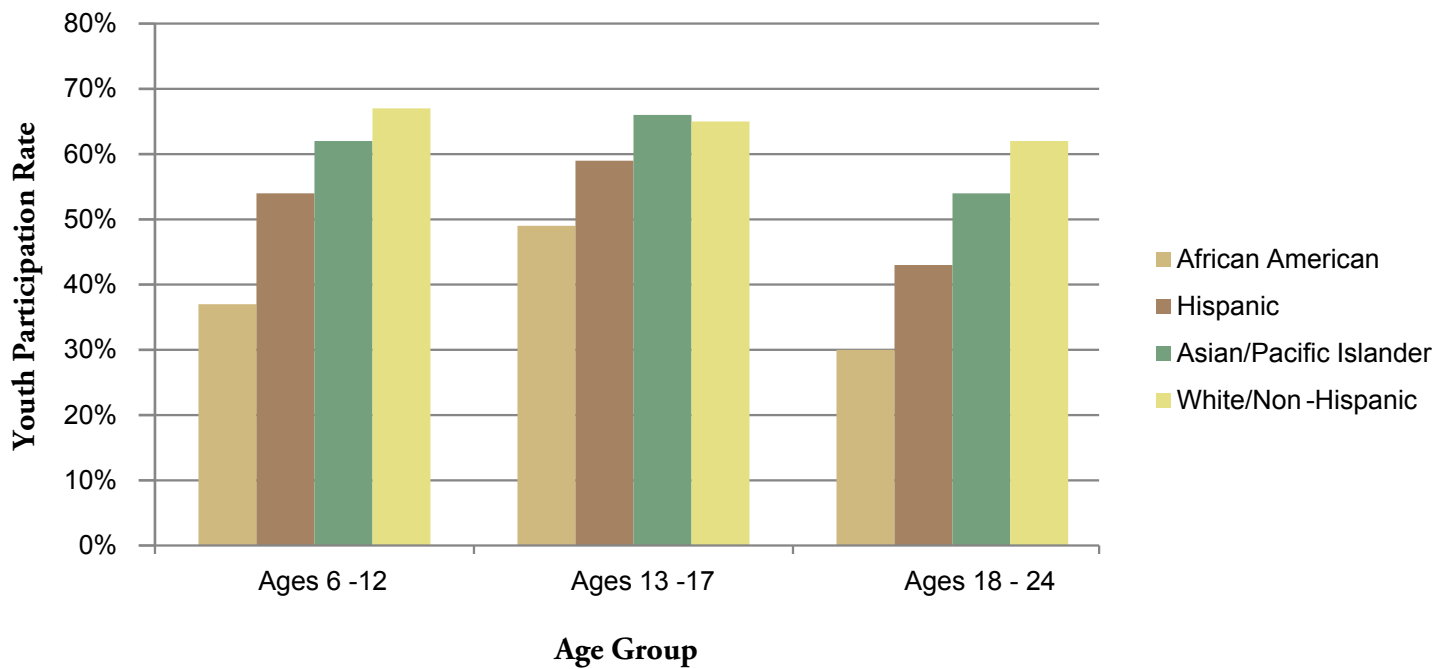
FIGURE 1

Figure 1. Youth Participation in Outdoor Recreation by Race and Ethnicity
<u>*Note*</u>*: Adapted from the Outdoor Foundation Report, 2012*

In addition to different participation rates among youth, results show variation in activities enjoyed by different populations of youth while in the outdoors. For example, Larson, Green, and Cordell (2011) reported African American, Hispanic and Asian Pacific Islander youth were more involved in team sports than White youth; African American youth enjoyed using electronic devices outside more frequently than youth in other racial/ethnic groups; and Hispanic and White youth had the highest levels of participation in nature based activities such as wildlife viewing, camping, and fishing. Differences were also found in activity preference between male and female youth. Consequently, gender comparisons showed males favored nature-based activities and land-based sports, while females preferred water-based activities.

Obstacles to Participation: The Persistence of Constraints

In extant literature, access, fear, and lack of interest and/or time constraints are common explanations for why youth do not participate in the outdoors. The ever-present issue of access includes the need for transportation to and from outdoor recreation areas and inadequate resources for recreational pursuits. The kinds of resources youth reported lacking were specialized gear or equipment, entrance fees, and knowledge about which activities to pursue in what

places. Additionally, youth have stated they typically do not have companions to join them in the outdoors—largely due to having friends or family that may not enjoy being outside (BAOSC, 2012; Breaking Barriers, 2012; Zanon et al., 2013)

Personal fears or parental concerns (e.g., "stranger danger") are other obstacles to spending time outdoors. In 2009, findings from an investigation of youth interests in the outdoors by the California Department of Parks and Recreation demonstrated concerns about personal safety as a major constraint to spending time outside (Goldenberg et al., 2010). Similarly, youth reported being afraid of being injured by "dangerous people," animals, or from becoming lost in unfamiliar places (Breaking Barriers, 2012). In another study, Stodolska, Shinew, Acevedo, and Roman, (2013) found fear of crime was salient in the lives of Chicago youth and a barrier to visiting parks and participating in outdoor recreation. Parent or caregiver concerns about safety about can also affect youth participation as adults may prohibit youth from being in, or traveling to, outdoor spaces unsupervised; this is particularly stressful for parents in low income neighborhoods (Weir, Etelson, & Brand, 2006).

A lack of interest is another category of barriers to youth participation in outdoor recreation. Results from

the Outdoor Recreation Participation (2012) survey show 45% of young people who chose not to participate in outdoor recreation did so because they were "not interested" in spending time outdoors or in the kinds of activities available in natural spaces.

Regarding the long studied construct of "time", in the recreation and leisure literature this is well-known as the number one barrier across all populations; hence with studies involving youth, key considerations include family obligations, homework and school commitments, over-scheduling by parents/caregivers, and other "kid" related issues. Additionally, youth reveal preference to engage in other kinds of activities thereby leading to self-imposed limited time available for outdoor recreation (Breaking Barriers, 2012; Larson et al., 2011; Betz, 2012). Such responses raise questions about how young people prioritize leisure activities. Additional research is needed to gain a more complete understanding of how youth make choices about their discretionary time and rationale behind their decisions.

Another barrier discussed in the literature is the degree to which outdoor recreation settings have been created or identified as culturally relevant to individual or collective identities (Roberts & Rodriguez, 2008). For example, the Bay Area Open Space Council (2010) found that young people who identified as Black, Hispanic, Pacific Islander, and multi-racial were more likely than their White peers to answer "No" to the question: "Do you see people who look like you when visiting open space parks?" This lack of representation in participants, leadership and mentors, coupled with a lack of multilingual informational materials (e.g., signs and brochures), may have contributed to youth feeling that "outdoor recreation is not meant for them" (BAOSC, p.12). Similarly, in another Bay Area study, a lack of racial representation among park staff contributed to adult feelings of exclusion from an urban national recreation area (Roberts & Chitewere, 2011). Given the prevalence of the concept of *cultural relevance* in recent literature, scholars who study perceptions of the outdoors suggest attention be paid to two societal trends when assessing long-term forecasts of research on attitudes and behaviors of racial/ethnic minority groups: "1) the emergence of a new racial and social structure and, 2) the increasing complexity in measuring and articulating ethnic identity" (Shinew, Stodolska, Floyd, Hibbler, Allison, Johnson, & Santos, 2006, p. 404). Consequently, scholars who examine the experiences of youth, specifically, in outdoor spaces suggest more research is needed to understand how race, ethnicity, immigration status, and language influence trajectories of participation for youth in the outdoors.

A growing body of knowledge offers valuable information about youth experiences with the outdoors (see http://www.childrenandnature.org/research). The literature captures a variety of youth perspectives about what it means to spend quality time outside and offers a diversity of opinions about constraints to participation. This work offers a greater understanding about the benefits, interests, and motivations to spend time in the outdoors. What it does not tell us, however, is how young people, make meaning of time spent in outdoor places and how connecting to the natural world is relevant to a young person's lived experience—which is important, if agencies like the USFS and other public land managers, aim to comprehend the kinds of messages and images that will inspire urban youth to spend more time outside. To accomplish this, our team asked youth who reside in the Bay Area to reflect on their current relationship with the outdoors, to draw upon their knowledge about their peers, and to explore development of what a media campaign might entail that could promote youth interest and engagement in the natural world outside their doors. Next, we provide theories and frameworks that have guided this current project and offered a foundation for supporting this topic.

— Media and Communication Campaigns —

Communication theory may shed light on how the media can contribute to a successful campaign to encourage urban youth to use the outdoors more frequently. In particular, this theory demonstrates the value of empowering youth to act as producers of the media messages directed at their peers. Though there is some controversy about the influence the media have on environmental attitudes generally, and on outdoor activity in particular, many scholars suggest a media campaign can be effective. Criteria that influence the success of a media

campaign include a focus on the knowledge/information phase of the decision-making process, the activation of opinion leaders, and the use of spokespeople who are similar to the target audience. This suggests that a campaign to encourage urban youth to spend more time outdoors would be most effective if it is comprised of media messages produced by their peers. Each of these concepts will be discussed in turn.

The connection between media use and attitudes towards nature is controversial. Critics (Good, 2007; Gore, 2008; Lakoff, 2010; Louv, 2006;) argue that the use of electronic media disrupts our relationship with nature, either through content that promotes materialism and frames nature as separate from humans, or through structural factors such as competition for time, or physiological effects. Despite these concerns, other studies suggest the media can play an important, positive role in campaigns designed to increase environmental attitudes and behaviors (Beattie, Sale, & McGuire, 2011; Hansen, 2011; Holbert, Kwak, & Shah, 2003). Although research about media use and environmental attitudes of youth is limited, Östman (2013) describes a positive correlation between their use of news media and pro-environmental behaviors.

Diffusion of Innovations: Bring on the New Ideas

The theory of *Diffusion of Innovations* (Rogers, 2003) suggests media are most effective at the distribution of information and new ideas during a persuasive campaign. It addresses the question of why some ideas and practices spread more quickly through a social system than others do and may be applied to ideas and behaviors, such as going to parks or spending more time outdoors, as well as to material innovations such as the installation of solar panels. Based on Rogers' (2003) large and broad-based analyses, this theory has been very influential in the design of communication campaigns around the world. Essentially, it suggests the likelihood of a community accepting an innovation is influenced as much by that community's perceptions of the innovation as it is by the actual benefits or quality of the innovation.

Rogers (2003) defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p. 11). He suggests that diffusion includes five stages: 1) knowledge - when an individual learns about the innovation or gains some understanding about how it works; 2) persuasion - when an individual forms a favorable

or unfavorable attitude about the innovation; 3) decision - when an individual actively engages in behaviors, such as information seeking, that lead him or her to a choice to adopt or reject the innovation; 4) implementation - when an individual actually begins to use the innovation; and 5) confirmation - when an individual seeks feedback about the decision after it is made (p. 169).

Diffusion theory (Gawande 2013; Griffin & Dunwoody, 2000; Heri & Mosler, 2008; Rogers 2003) suggests that media are most effective during the knowledge stage of diffusion. Entertainment television also has been found to be effective at communicating information about innovations (Singhal, Cody, Rogers, & Sabido, 2004). One example unrelated to the outdoors, but salient to make a point, is that Brown and Walsh-Childers (2002) reported a significant increase in knowledge about emergency contraception after it was featured on an episode of the television series "E.R." Thus, media do not need to be limited to nonfiction programming to successfully provide knowledge information about an innovation to a community.

Though many studies argue media are most effective in the knowledge phase of a diffusion campaign, some research suggests that, in specific circumstances, the media may be effective in the persuasion stage of diffusion as well. For example, Thakadu and Tau (2012) purport that certain groups were more inclined than others to use media channels for learning about environmental innovations in Botswana's Okavango Delta. In particular, young, educated adults were more likely to use television as a source for environmental information.

Diffusion of Innovations theory suggests that both fiction and nonfiction media can be used effectively as part of a campaign to encourage urban youth to go to parks and spend more time outdoors. The theory indicates that the media would be most powerful at providing information and knowledge about outdoor opportunities. Though some research suggests the media are also effective in actual persuasion, face-to-face communication is generally considered to be more successful at this stage of the diffusion process.

Opinion Leaders: Tapping into Community Connections

A media campaign may bolster its limited effectiveness in the actual persuasion stage of the process by activating opinion leaders. Opinion leaders are individuals who are well connected in the community and have the ability to influence others (Rogers, 2003, p. 27). They are considered

to be effective at persuasion because they are known, trusted, and are considered topic experts. And, opinion leaders may develop some of their expertise through the media. For example, Dalrymple, Shaw, and Brossard (2013) found that bait vendors who learned about the problem of invasive aquatic species through the Internet had higher levels of perceived self-efficacy and were more likely to act as opinion leaders by attempting to persuade their customers to practice positive fishing and boating behaviors.

Nisbet and Kotcher (2009) describe Al Gore's mix of interpersonal and media communication in his international climate change campaigns. And, how Gore recruited and trained volunteers to act as opinion leaders in their communities was discussed. These volunteers were encouraged to present individualized versions of his climate change slide show adapted to meet their personal style and tailor it to the needs of their communities. The campaigns also used social media to support this network of opinion leaders.   Thus, a media campaign may improve its influence in the persuasion stage of the decision process by galvanizing opinion leaders and providing resources that enable them to be more persuasive.

Homophily: The Impact of Source Similarity

In his work, Rogers (2003) considers another attribute of the communication channel: how well the source of an innovation message matches the social system receiving the innovation. Homophily refers to the extent that individuals share similar attributes. It is most prevalent when people spend time in the same groups or participate in similar activities. The opposite condition is heterophily, which occurs when individuals are very different. Rogers notes that most effective communication occurs between homophilous individuals, but "one of the most distinctive problems in the diffusion of innovations is that the participants are usually quite heterophilous" (p. 19).

The heterophilous nature of many media messages may explain their limited value in the persuasion stage of diffusion. Other communication scholars suggest people respond more positively to sources they perceive to be similar to themselves. Given the surge of literature exploring parks and health, one example of this perception is from Spence, Lachlan, Westerman, and Spates (2013) who found that African American audiences judged African American avatars to be more credible sources

for health information, particularly in the areas of trustworthiness and caring. What credible media sources exist for African Americans in relation to health benefits of visiting parks?

Similarly, Flanagin, Hocevar and Samahito (2014) examined the use of online information and learned that people are more likely to act on information contributed by people they also perceive as 'similar to themselves.' Adams and Gynnild (2013) found an interactive online footprint calculator with online videos to be an effective environmental education tool, but it was limited by the lack of reference to local norms and ideas.

The idea that people will respond more positively to messages from sources they perceive as similar to themselves is also rooted in persuasion theory. Although he predates the time frame reflected in this literature review, Burke (1969) is a very important persuasion theorist (Foss, Foss, & Trapp, 2014), and his work informs this research. He argues that *identification* is an important part of effective communication and persuasion. He describes three kinds of identification: 1) material identification is built when we have similar possessions or taste; 2) idealistic identification springs from shared ideas, attitudes, feelings and values; and 3) formal identification occurs when people participate in shared events or organizations.

Media theory and research verify the potential for a communication campaign that features messages promoting outdoor activities and parks, which are produced by urban youth for urban youth. Research suggests that media messages are most effective at providing information for the knowledge stage of the diffusion process; young producers are likely to be good at selecting material that is relevant to other youth with similar backgrounds. A campaign such as the present USFS project has the potential of being seen as more credible and appealing because youth who are homophilous with the target audience have produced the media messages. Furthermore, they are also more likely to be effective at inspiring opinion leaders within their specific community. As Thakadu and Tau (2012) note, however, the success of a media campaign is also dependent on how well it matches the media use of the target audience. What is known about the media habits of youth will be examined in the next section.

— *Youth and Media: What Lies at the Intersection?* —

Youth today live in a "multidevice, multiplatform, multichannel world" (Carr, 2007, para 1). The advent of cable and satellite television has increased the number of channels available in most homes and rapidly evolving digital tecnology has drastically altered the nature of media experiences. The TV screen, which was traditionally a way to watch broadcast television, is now being used for a whole range of activities, including playing games, video-on-demand and online shopping. Newspapers, which were once delivered to doorsteps are now delivered online to computers, tablets and phones. Children can enter virtual worlds, travel to different places, interact with people and play adventurous games without ever leaving their homes. These new media are "far more interactive, allowing youth to become participants in their quest for information, action and storytelling" (Strasburger, Wilson, & Jordan, 2009, p. 5).

How are the youth today responding to this complex media environment? Factoring in additional media consumed in multitasking, youth pack over 10 hours worth of media content into their everyday lives, an increase of more than two hours daily of media exposure from 2005 to 2010 (Vahlberg, 2010). Young people split their media time across a variety of activities such as social networking, watching videos and TV, exchanging Instant Messages, viewing graphics and photos, listening to music, playing games, and searching for information online. Use of media occurs among many platforms such as cell phones, MP3 players, gaming devices, televisions, computers and printed materials. Results of a study reported by the Kaiser Family Foundation show "the transformation of the cell phone into a media content delivery platform, and the widespread adoption of the iPod and other MP3 devices, have facilitated an explosion in media consumption among American youth" (Kaiser Family Foundation, 2010, p. 5).

In this section, a brief overview of various media technologies and adoption/usage by youth who reside in the United States is discussed. While there are wide variations in the quality of data available on media habits of children and adolescents there are three key reputable sources that provide national-level data: The Kaiser Foundation, The Nielsen Company and The PEW Research Center. The Kaiser Foundation collected data from nationally representative samples of 8 to 18 year olds in 1999, 2004 and 2009. The most recent national survey had a sample of over 2,000 young people.

Second, the Nielsen Company is a leading global information and measurement company providing market research, insights, and data about what people watch and purchase. Nielsen has census level accounts of screen media usage, page views, and video streams in which Nielsen measurement tags have been positioned to project audience and behavior using a representative sample. Third, the Pew Research Center is a think tank that conducts public opinion polls, demographic research, media content analysis, and other empirical social science research. The most recent survey on teens and technology collected data from a nationally representative phone survey of more than 800 parents and their teenage children ages 12 to 17 years.

Television

The Nielsen Company offered an in-depth look at today's American youth, raised in an age dominated by media choices – from the Internet to cable channels to web connected devices (The Nielsen Company, 2009, 2011). The study examined a day in the life of a typical U.S. teenager and revealed that watching videos, led by TV viewing, comprises the majority of teen media consumption (see Figure 2).

FIGURE 2

TV 3 hours, 20 minutes	PC 52 minutes including applications	Mobile Voice 6 minutes	Video on an MP3 Player 1 in 4 watched
DVR 8 minutes	Internet 23 minutes	Text Messages 96 sent or received	Audio-Only MP3 Player 1 in 2 used
DVD 17 minutes	Online Video If they watches, watched 6 minutes	Mobile Video If they watched, watched for 13 minutes	Newspaper 1 in 4 read
Console Gaming 25 minutes	PC Games 1 in 10 played, today	Mobile Web 1 in 3 used	Movie Theater Went once in the past 5 weeks

■ **Video Content**

Figure 2. Media consumption of a typical U.S. Teenager in a day
Source: The Nielsen Company (2009). *How teens use media.*

A national study in which more than 2,000 children ages 8 to 18 participated, found similar results (Kaiser Family Foundation, 2010). But while the amount of time young people spend watching TV has increased since 1999 (see Figure 3), the nature of this viewing has changed.

That is, today, there are many new ways to watch TV and Live TV is starting to take a backseat to newer platforms like mobile and online. Figure 4 details how youth viewed television across multiple platforms.
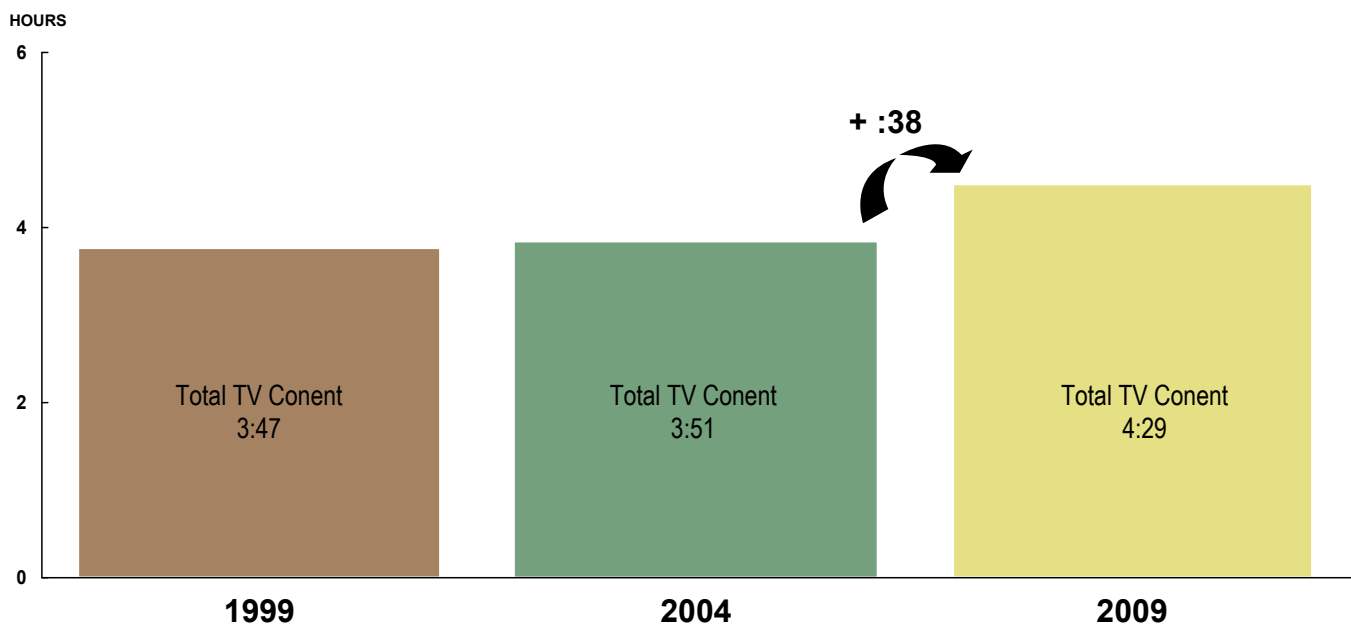
FIGURE 3

Figure 3: Hours of TV content for youth ages 8 to 18 between 1999-2009

FIGURE 4

HOURS

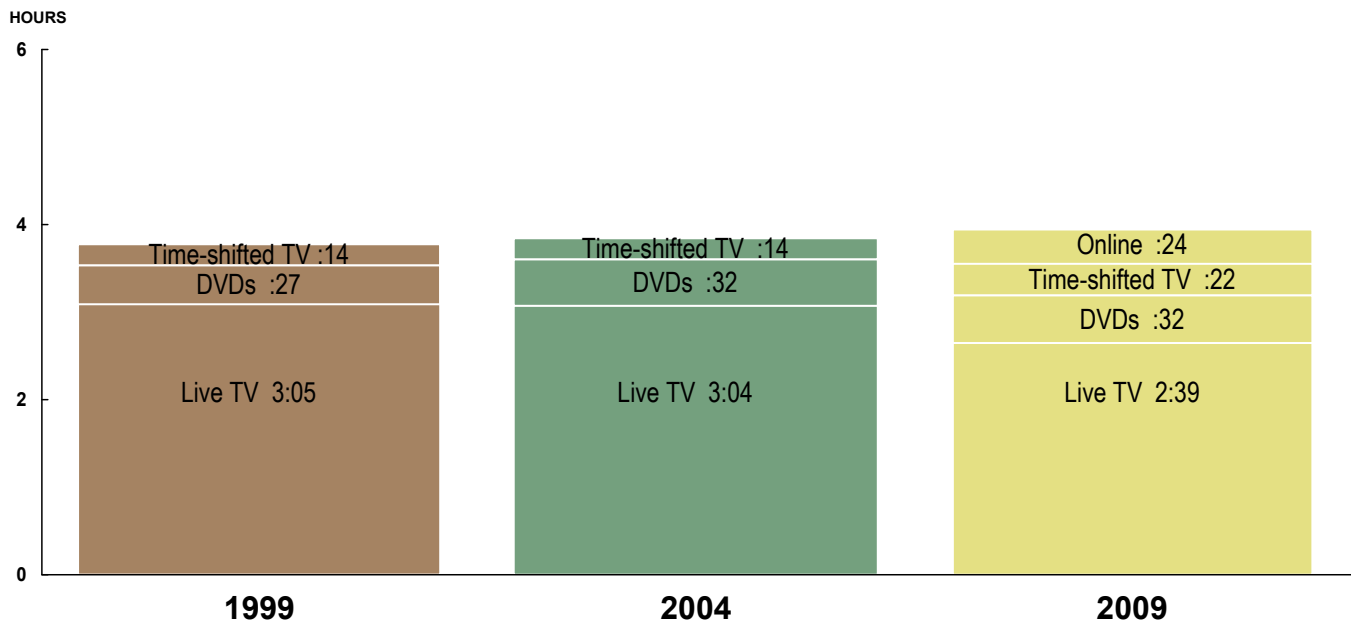|	1999	2004	2009
Online			:24
Time-shifted TV	:14	:14	:22
DVDs	:27	:32	:32
Live TV	3:05	3:04	2:39

Figure 4: Hours of TV content for youth ages 8 to 18 between 1999-2009 separated by platforms

Note: Figures 3 and 4 are adapted from Kaiser Family Foundation (2010). *Generation M2: Media in the lives of 8 to 18 year-olds.*
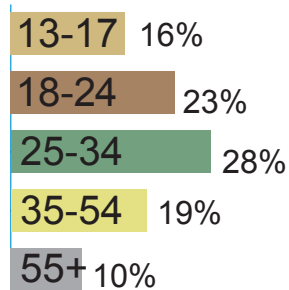
Mobile Devices and Youth: Savior or Nemesis?

Twenty percent of media consumption among youth ages 8 to 18 (over 2 hours a day) occurs on mobile devices: cell-phones, tablets, or handheld video game players (Tarpley, 2012; The Nielsen Company, 2009). In the U.S., 77% of teens already have their own mobile phone; another 11% say they borrow one on a regular basis (The Nielsen Company, 2009). But in just two years, smartphone use has exploded. In 2011, for example, 40% of teenagers had smartphones compared to just 16% in 2009 (See Figure 5) (Nielson, 2013).
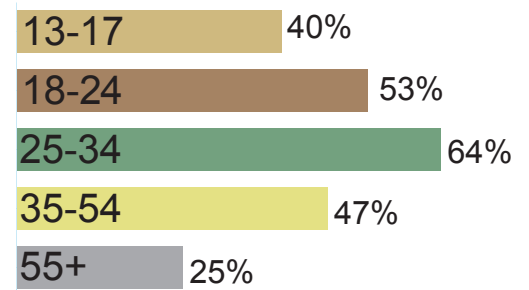
FIGURE 5

PENETRATION BY AGE

Age	
13-17	16%
18-24	23%
25-34	28%
35-54	19%
55+	10%

2009

PENETRATION BY AGE

Age	
13-17	40%
18-24	53%
25-34	64%
35-54	47%
55+	25%

2011

Figure 5: Smartphone penetration across age groups in 2009 and 2011

Source: The Nielsen Company (2011). *The Mobile Media Report*

Furthermore within households with teens (ages 12-17) and young adults (ages 18-24), smartphone and tablet ownership is growing faster than other device ownership including laptops, DVD players, game consoles and DVR devices (The Nielsen Company, 2013).

Texting is by far the most popular feature of mobile phones among teens. In 2011, youth ages 13 to 17 reported sending an average of 3,364 mobile texts per month. And more than half of all U.S. teen mobile subscribers (66%) say they prefer text messaging to talking to a person on the phone (The Nielsen Company, 2011). However, texting is not the only means of communicating with youth over the mobile phone. Youth are avid users of a wide variety of advanced mobile data features (See Figure 6). For example, more than one-third of teenagers download ringtones, use the Mobile Web or Instant Message, and about one-quarter of youth reported downloading games and applications (The Nielsen Company, 2009, p. 8). Also popular amongst youth is viewing videos on mobile devices. On average, mobile subscribers ages 12 to 17 watched 7 hours 13 minutes of mobile video each month, compared to 4 hours 20 minutes for the general population (The Nielsen Company, 2011).
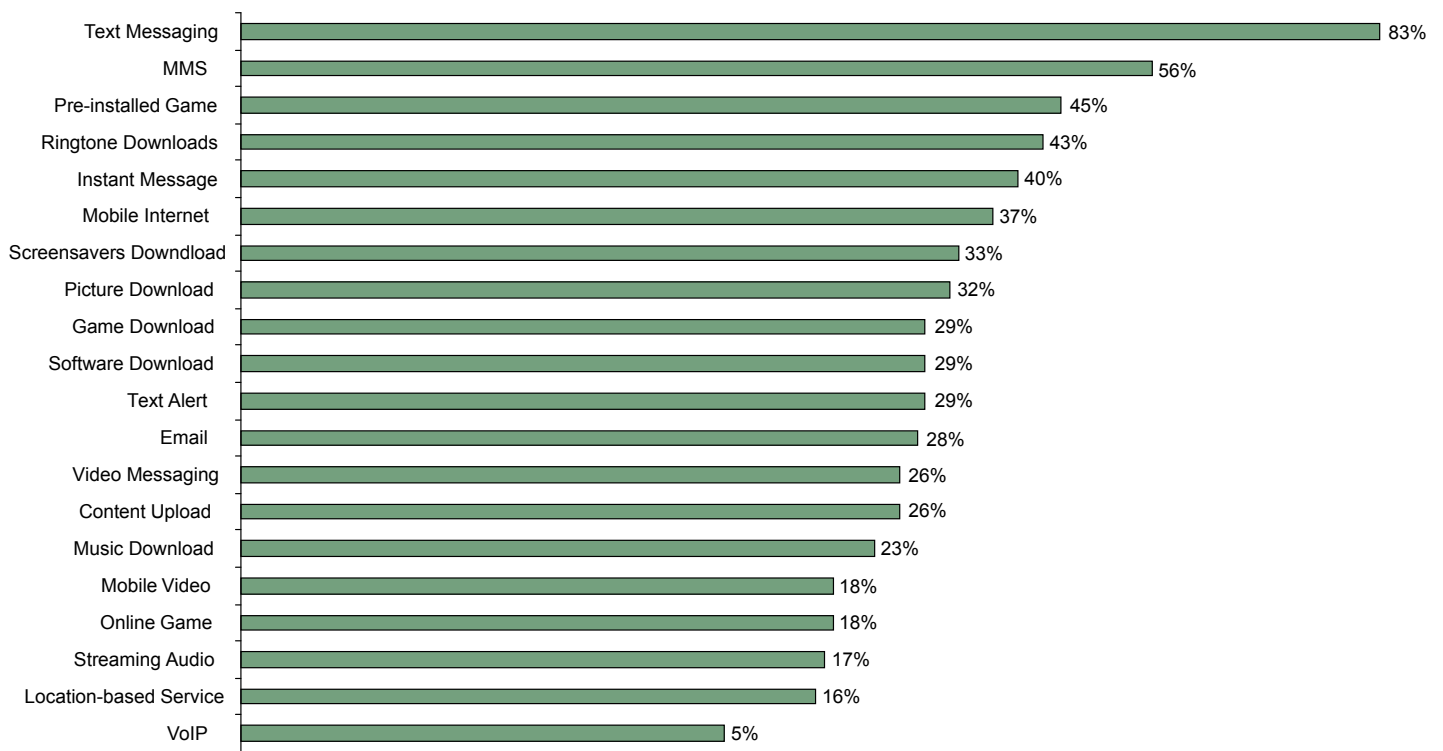
FIGURE 6

Figure 6: Mobile media use by U.S. Teen 13-17 Mobile Users 2009
Source: The Nielsen Company. (2009). *How teens use media.*

The Internet Explosion

Internet use amongst youth in the U.S. is popular and use is increasing exponentially. Ninety-five percent of all teens (ages 12 to 17) in the U.S. spend some time online (Lenhart, Madden, Macgill, & Smith, 2011) and 7 out of 10 youth (ages 8 to 18) are online on a daily basis (Kaiser Family Foundation, 2010). According to Zickuhr (2009), there are approximately equal percentages of girls and boys online (95% and 93%, respectively). A breakdown of online use by race and ethnicity depicts 96% of White, 92% of Black, and 87% of Hispanic youth are using the Internet.

Most teens access the Internet at home (89%), school (77%), someone else's house (71%), or a library (60%) (Zickuhr, 2009). Among teens with Internet access at home, 55% of teens with Internet say they have a wireless connection (The Nielsen Company, 2009). Youth, ages 12 to 17 living in households with lower-income and lower-educational attainment, have a different use profile. According to Madden, Lenhart, Dugan, Cortesi, and Gasser (2013), these youth are:

Still somewhat less likely to use the internet in any capacity—mobile or wired. "However, those who fall into lower socioeconomic groups are just as likely and in some cases more likely than those living in higher income and more highly educated households to use their cell phone as a primary point of access" (p.8).

Increasingly, teens are enjoying mobile access to the Internet, as wireless devices (e.g., laptops, cell phones, PDAs) become more powerful and pervasive (Lenhart, Madden, & Hitlin, 2005). About three in four teens, ages 12 to 17, report accessing the Internet on cell phones, tablets, and other mobile devices at least "occasionally" (Madden, Lenhart, Dugan, Cortesi, & Gasser, 2013).

While online, youth spend the largest portion of their time on social networking sites (25%), followed by playing games (19%) and video sites (16%) (Kaiser Family Foundation, 2010). For a breakdown of youth online activities see Figure 7. Additionally, content creation is a rapidly growing area of Internet activity among youth (Lenhart, Madden, & Hitlin, 2005) with nearly sixty percent of all youth ages 12 to 17 engaged in content creation on the Web. Online content creation activities include: maintaining an online journal or blog (28%); building a personal webpage (27%); creating a webpage for friends, school assignments, etc.; sharing an original work online (photos, stories, etc.) (33%); and remixing content (26%) (i.e., editing, making additions or changing content in some way) (Gasser, Cortesi, Malik, & Lee, 2012; Lenhart, Madden, & Hitlin, 2005).
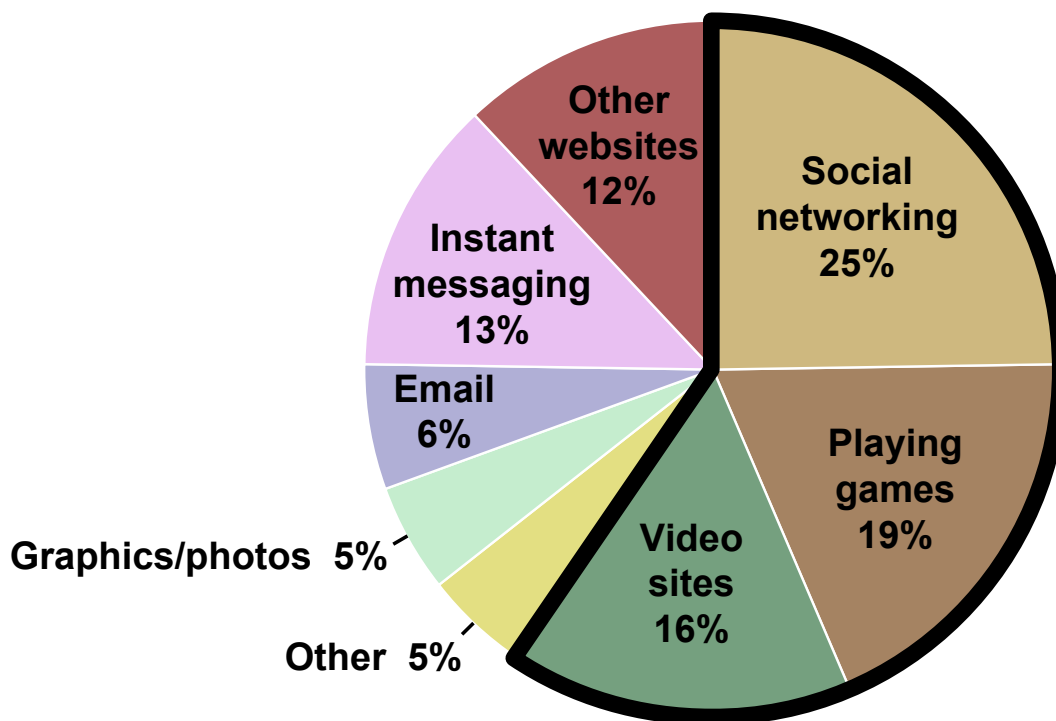
FIGURE 7

Figure 7: Proportion of recreational computer time 8- to 18-year olds spend in various activities
Source: The Kaiser Family Foundation (2010). *Generation M2: Media in the lives of 8–to18–year olds.*

An ever-increasing number of youth online are treating the Internet as a social medium where they meet and interact with others. American teenagers on average spend 22 minutes a day on social networking sites; that is 25% of their computer time (Kaiser Family Foundation, 2010). Nearly eighty percent of teens online (i.e., 76% ages 12 to 17) use social media, such as Facebook, Twitter and Instagram (Lenhart, Madden, Macgill, & Smith, 2011). According to a study conducted by the PEW Research Center (2013), 77% of online teens use Facebook and 24% of online teens use Twitter, up from 16% in 2011. Instagram is slowing catching up with the more popular sites.

It is interesting to note is that a decline in the usage of Facebook in a syndicated study on digital consumers in 32 markets has been confirmed (Olson, 2013). Their survey of teenagers in 30 countries revealed that the number of youth who claim using Facebook had dropped from 76% in the first quarter of 2103 to 56% in third quarter. In the U.S. alone, this represented a decrease of 16%. The messaging platform *WeChat* has seen the most rapid growth in active users aged between 16 and 19 during the first half of 2013. Other platforms that have seen increased use include the video sharing app, *Vine* (owned by Twitter), the mobile app for photo-sharing, *Flickr* and the photo-sharing application, *Snapchat*. These changes can be explained by a general trend in users shifting to mobile as well as a large rise in the use of Facebook's mobile application. Figure 8 details trends in use amongst the top 20 applications.
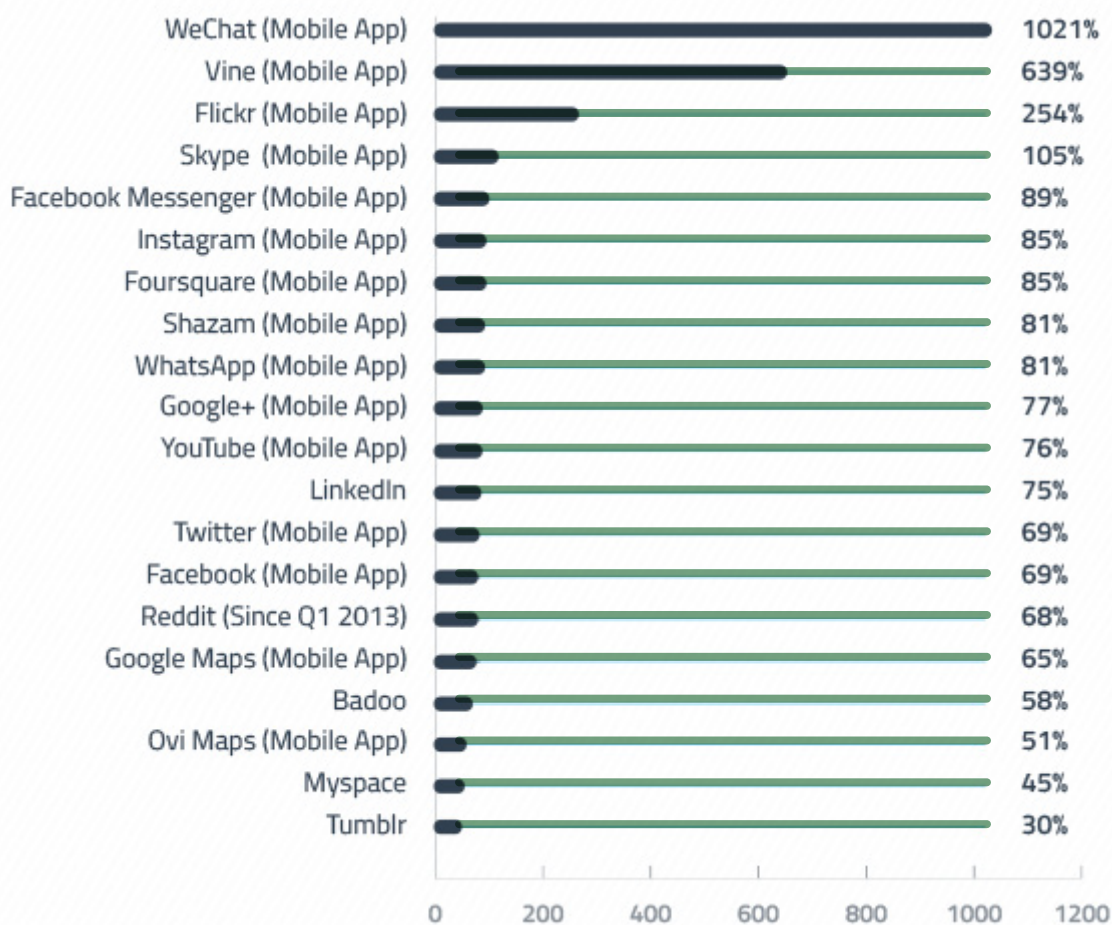
FIGURE 8

Figure 8: Trend in active usage, top 20. Percentage of Teens
Source: Olson, P. (2013). Here's where teens are going instead of Facebook. *Forbes.*

It is important to understand why social media are so crucial and attractive to youth. Several studies have shown social media fulfill a number of "psychological, social, and emotional needs of teenagers" (Zhao, Qiu, & Xie, 2012, p. 102). Fascinating and often misjudged, Zhao, et al. (2012) divided these needs into four categories: escape, entertainment, connections and exploration.

Escapism is a main source of gratification for young Internet users (Leung, 2003). For example, social media provides innumerable possibilities for escape from real life but can have both positive and negative consequences. While it can serve as a coping mechanism to deal with family troubles, bullying and discrimination can also lead to "harmful social relationships, obesity and other negative health consequences from a lack of activity and further depression" (Zhao, Qiu, & Xie, 2012, p. 102).

Social media also provides spaces for *entertainment*. For young people, social media function as a "third space" to construct social lives (Zhao, Qiu, & Xie, 2012). The first space is the domestic sphere - family and home; the second space is the sphere of public participation such as school and the place of work. Set against these, is a third space where people let their "real" selves show. Having a third space, beyond home and school is important for the social development of children. Social media provide a place where youth can be free of social status, background and barriers that make it difficult to establish their desired social life in an offline space.

Furthermore, social media can help youth forge *connections* with friends, peers, family, and even strangers. Hundley and Shyles (2010) found that children spend time on social networking sites mainly for the purpose of socialization (e.g., cement offline relationships and meet new people online). The fourth category proposed by Zhao, et al (2012) is young people's desire for *exploration*. Social media serve as an "identity laboratory" for children to get to know themselves and provide spaces where young people can experiment with a variety of social identities in virtual worlds.

— *Final Thoughts* —

To understand how to reach diverse urban youth effectively and strengthen connections to the land, it is necessary to both understand social structures within a younger generation as well as identify appropriate media that resonate with them directly. As reflected in this review of literature, research has shown that youth still spend a major segment of their time consuming video content. The big change is not only the diversity of platforms employed to view video content, but also the use of platforms that were beyond imagination only a decade ago.

Research also shows that digital media have become an integral part of the media landscape surrounding youth and young adults. The use of online communication applications (e.g., Facebook, Vine, Snapchat, Instagram) among youth is growing exponentially. While not all media consumption is related to social media, it can be said that social media occupy a sizable portion of youth media consumption. The media produced for this USFS project, as introduced in this paper, is largely informed by this existing literature.

Current demographic shifts reveal population growth for racial and ethnic minority groups across the U.S. is increasing much faster than the rate for the nation's population in general. And, a growing cadre of urban communities seeks new experiences and new opportunities, including within forests, parks and other public lands. More specifically, and unfortunately, access and opportunities for many urban youth remains acutely unequal. Regardless of race, gender or family income, for instance, young people growing up in metropolitan communities deserve the same resources afforded their more privileged counterparts. Use of new media and innovative forms of communication in the outdoors must expand and continue to evolve in order to meet changing needs.

Many socio-political and economic factors contribute to positive development of urban youth. The day-to-day issues faced by this group leads to many psychological, physical and spiritual challenges that may be mitigated through innovative programs and services

that occur in natural settings. By acknowledging youth living in urban areas may have many pressing social and community problems, professionals can begin to address their needs through intentional programming, understand what messages they connect with and how, and continue to provide media avenues for embracing youth voice, authentically. Research that answers questions such as: How are youth transformed as a result of their participation in the outdoors? How does the media enhance or inhibit these experiences? And what can we, as scholars, leaders and managers learn from listening to youth ideas about this topic is essential if we are to develop a pathway for the next gen to lead the way and develop new opportunities to experience the outdoors—which is vital for our future.

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