ONLINE PROGRAM DEVELOPMENT FOR YOUTH: A QUALITATIVE ANALYSIS OF
ONLINE PROGRAM CONTENT, INSTRUCTION, AND IMPLEMENTATION

BY

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DISSERTATION

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Abstract

Although many practitioners have turned to the Internet as a viable means of reaching youth with their programs, there is little research on how and when youth engage with online educational resources. The present study employed a grounded theory design to gain an understanding of how practitioners can develop online programs that engage youth. Participants completed face-to-face interviews ($n = 27$) and reviewed two online programs that addressed relationship education ($n = 22$), which provided the foundation for the analysis of how youth's preferences for online program characteristics are linked to their online program exposure and ongoing participation. The analysis resulted in a four stage model of engaging youth in online programs, with a focus on the types of content, or topics (i.e., work/careers, social skills), technological tools (i.e., social networking platforms, videos), and delivery style (i.e., entertaining, opportunities to give/receive feedback) preferred by older adolescents. Implications center on the types of content (e.g., work/careers, social skills, relationships, media literacy) and delivery modes (e.g., the different instructional pathways for the various topics covered) that practitioners should consider. Additionally, future research that quantitatively examines the four-stage model and individuality among youth, or qualitatively allows youth to be a part of the program development and evaluation process is discussed.

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Dedication

I would like to dedicate this work to Zoe and Jade, who inspired my career path and my focus on youth in this study. Your determination, quizative minds, and future potential have been my constant motivation to complete this work. It is my hope that by the time you reach older adolescence, there are many quality, research-based positive youth development programs that will help you explore your identity and provide positive guidance through the decisions and mistakes you will make, ensuring a sense of agency, as well as success and happiness throughout adulthood.

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Chapter One: Introduction

Changes in the technological landscape in the last two decades make it possible to expand programs for youth from traditional face-to-face program designs to other delivery modes, and many practitioners are turning to the Internet as a means of reaching youth in their educational outreach efforts. It is estimated that 93-95% of youth utilize the Internet for a variety of activities (Zickurh, 2010) and in general, youth in the United States view modern technology positively (Pew Research Center—Millennials, 2010). The number of youth who are already online, and the foreseen benefits of the capabilities of the Internet to reach more youth with less financial burden, is often cited in evaluations of online programs for youth (e.g., Roberto, Zimmerman, Carlyle, & Abner, 2007). Youth, however, have choices, and the Internet provides many options for youth. One question and answer search can generate millions of responses, and "sifting through the enormity of information to determine if it is accurate, credible, and useful is an ominous task" (Ebata & Dennis, 2011, p. 242). As such practitioners can create quality, research-based content and develop online delivery systems for youth, yet that does not mean they will be exposed to the content or will chose to participate in the program if not mandated (e.g., by school, parents, and the law) to do so. In fact, comprehensive research on how, what, or when youth are motivated to learn online is limited.

Many online programs for youth are evaluated by testing the direct effects of the online program on targeted outcomes, which generally center on problem behaviors (e.g., eating disorders, stress and anxiety, or drug and alcohol use/abuse). For example, researchers evaluated the effects of an online education program on college students' alcohol consumption (Croom et al., 2008). The program was created based on research linking alcohol consumption to high-risk behaviors and, in turn, negative outcomes among college students (e.g., injuries, sexual health, or death). Thus, the aim was to increase knowledge and elicit positive behavior. Croom and colleagues found that the program increased students' knowledge of alcohol-related issues; they, however, did not find significant improvements in the intervention group's behavior. They also noted that completion rates were lower for those in the intervention group (students in the online course) than the control group (students, who were given the University's alcohol policy handbook to read). Although incentives for recruitment (e.g., participants were entered into a drawing) and retention (e.g., a grade greater than 65% was considered "passing") were used and mentioned in the evaluation, Croom and colleagues did not mention the potential mediating or

moderating effects that these variables had on participants' attitude, knowledge, or behavior. Further, the authors reported descriptive variables related to individual characteristics (e.g., demographic variables such as age, gender, and ethnicity), yet they did not control for these variables. Additionally, they did not assess the influence or effects of program characteristics (e.g., program content, activities, or materials) on the outcomes. Croom and colleagues' research is just one example, but their research represents an approach taken by many online program developers that investigate the effects of an online without examining the role of other important factors; more research is needed on the role of potential confounding variables (e.g., individual characteristics or program characteristics).

Researchers may not test the effects of other essential variables because they do not know what they are. More exploratory research is needed among youth in order to provide a clear picture of the variables that should be included in future research and an explanation for how these components can influence the success or failure of online programs. Although program development scholars have provided best practices and guidelines for designing quality online programs (e.g., Hughes, Bowers, Mitchell, Curtiss, & Ebata, 2012), empirical support for developing online programs that engage youth, in particular, is needed. Specifically, more research is needed that broadly and inclusively reveals how and when various program components (e.g., the types of online program content, presentation styles, activities, or implementation strategies) are preferred by youth and how and when they influence their online experiences and involvement. This is important because researchers and practitioners need to possess knowledge on the program components and processes that influence youth's engagement in online activities in order to gain an understanding of what is needed for developing online programs for youth. To begin to address this limitation in the existing literature, the present study examined the processes that link individual characteristics, youths' preferences for program characteristics, online program exposure, and ongoing participation (see Figure 1). It is important to note that the goal of this research was *not* to suggest that online programming be used as a replacement for all traditional modes of delivery, rather the aim was to inform future research and online program development when it *is* a viable option.

Figure 1

Conceptual Model that Guided the Present Study

| Possible Underlying Antecedents | Outcome: Implementation Success or Failure |

| Individual characteristics |

| Youths' preferences for program characteristics |

| Online program exposure |

| Ongoing participation in an online program |
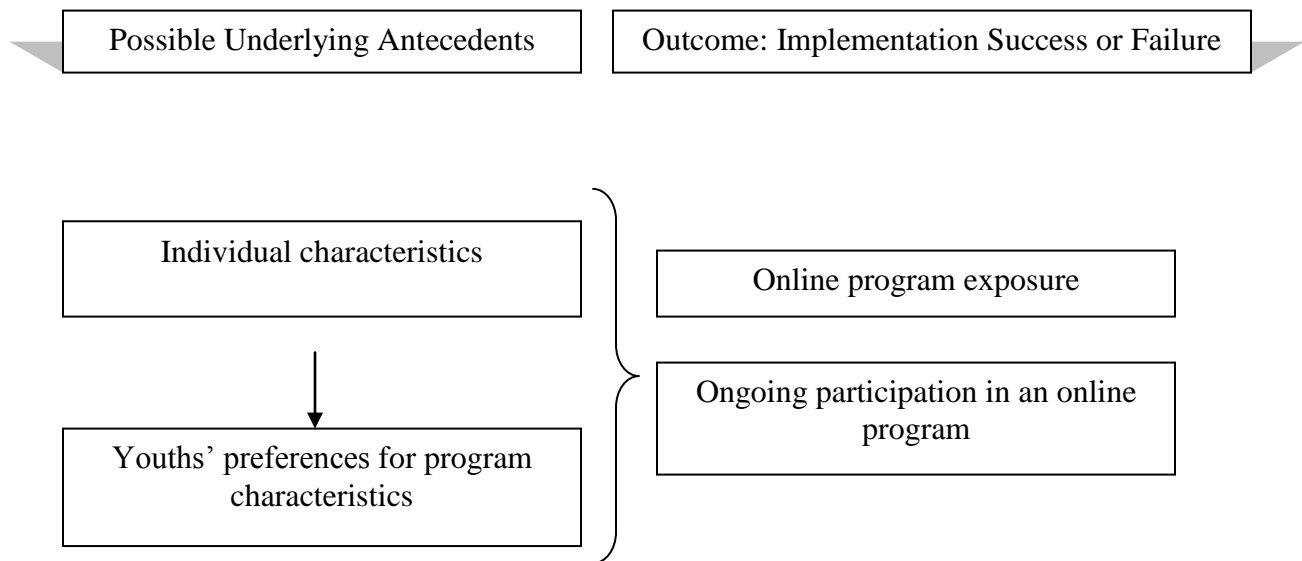
Chapter Two: Literature Review

The present study focuses on developing online program characteristics that engage older adolescents, in particular. In the last decade, the number of online programs for youth has increased, and practitioners have developed content and employed a variety of instructional strategies, including but not limited to newsletters, videos, games, ask the expert sections, discussion boards or other community designs, text messaging, email, and photovoice (Butler, Sproull, Kiesler, & Kraut, 2002; Rau, Gao, & Wu, 2008; Webb, Joseph, Yardley, & Michie, 2010; Weisz et al., 2007; Wilson et al., 2007). Although there is research which suggests viable options for online program delivery, a review of the literature supports the notion that practitioners would benefit from a comprehensive assessment of youth preferences in order to gain a true understanding of how and when youth are motivated to participate, and stay engaged, in online programming.

Definition of Older Adolescence

In general practice, the term *youth*, is ambiguously used to describe all children and adolescents. The present study focuses on developing online programs for older youth, yet uses the terms, *youth, older adolescents,* or *emerging adults* interchangeably to fit the context of the references in the literature made to online program delivery for 18 to 20 year olds. Erikson describes identity development as the "psychosocial aspect of adolescing" (Erikson, 1968, p. 91). Erikson claimed that typical adolescents strive to find out who they are and who they want to be while judging their own actions and interactions, weighing decisions and evaluating their own persona against that of their peers and adults in their environment or culture. For decades, developmental scholars have utilized Erikson's life cycle stage of psychosocial development as a valid means of understanding how individuals grow and complete tasks associated with identity and other psychosocial tasks in childhood and adolescence (e.g., establishing trust, experiencing autonomy, and taking initiative). Arnett (2000; 2004) builds on the work of early scholars, such as Erikson, and coined the term *emerging adulthood*, which he uses to describe a stage of life that represents 18-25 year olds who are in a transition between adolescence and adulthood. Developmental scholars have shown how physical, cognitive, and social-emotional developmental needs change dramatically from early to late adolescence, or emerging adulthood. For example, research has revealed that youth have a need for intimate relationships, yet for

many younger adolescents this focus is on peer approval or recreation, whereas for older adolescents the focus is on romantic relationships and specifically those that could be potentially long-term (Arnett, 2000; Erikson, 1963; 1968). Arnett (2000) states, "in adolescence, explorations in love tend to be tentative and transient [whereas…] explorations in emerging adulthood tend to involve a deeper level of intimacy" (p. 473). According to Arnett, similar discrepancies arise for work, school or career related issues. As such, online program content for 11 and 12 year olds should look quite different from that designed for 18-20 year olds.

Age differences in online activities. The research that details age-specific differences in online activity also highlights the need to explore the preferences of and differences among either older or younger adolescents, not both. For example, research has shown that younger adolescents (seventh graders) are significantly more likely to spend most of their online time chatting (i.e., instant messaging) than older adolescents (tenth graders) (Gross, 2004). Research also indicates that older teens (specifically, girls) may be more likely to use email, text messages, visit entertainment websites, or search for information about college, health, or religion online (Lenhart, Madden, & Hitlin, 2005). Some of this may be because for many youth, older adolescence comes with more freedom to explore.

Age and program delivery. Many older adolescents are more independent of their parents or guardians as most have their drivers' licenses and some work for pay. At the same time, much of the prevention programming geared toward adolescents aims to promote positive change in younger adolescents; some of this is because much of the funding for such initiatives is directed at "after-school" programs, which target students in elementary and middle school (Eccles & Appleton Gootman, 2002). As a result, older adolescents are less likely to be in supervised care or after-school programming than younger adolescents. Traditional program efforts for older youth may not be practical or feasible as this is a population that is hard to reach because of their independence, yet they still need guidance as they transition to adulthood. As such, online programming appears to be a viable option for reaching many older youth in particular.

What is an Online Program?

Online programs for youth exist in the form of websites, mobile applications, social media, or a combination of Internet-based formats. Program development scholars define an

online program as "any educational outreach effort that is primarily delivered via the Internet, and intentionally facilitates individual and family well-being by using online technologies that include programmatic educational strategies or structure" (Hughes et al., 2012, p. 712). Online programs for youth may be synchronous or asynchronous. With synchronous learning, there is generally an instructor and participants log in and engage with the content at the same time (Hayes, 2008); synchronous programming is similar to that of a traditional, or face to face, classroom setting. Asynchronous learning, on the other hand, is described as self-paced; participants log into the program on their own time and walk through a program on their own. This research centers on developing online programs for youth that are asynchronous, and specifically, focuses on reaching and engaging youth with these programs when they are not mandated to attend.

Rationale and Approaches to Online Programming

Some scholars use the number of youth online to provide rationale for reaching youth with online programs, or they emphasize the ways online programming can eliminate program barriers, such as accessibility (i.e., reaching those in remote areas or across time zones) or expenses encountered in traditional, educational settings (i.e., reaching wider audiences while replacing staff) (e.g., Collins & Bronte-Tinkew, 2010; Roberto et al., 2007). Each of these opportunities, or potential benefits, of online programs for youth lack empirical support and emphasize the capabilities of the Internet. Such paradigms facilitate a technology-centered approach, in which "the driving force behind the implementations was the power of technology rather than an interest in promoting human cognition" (Mayer, 2009, p. 12). Mayer believes that a technology-centered approach facilitates program failure; although online program developers must consider the capabilities of the Internet and the infrastructure or resources available to support it, the overall goal should be to implement a program that supports positive youth development, competence or learning. As such, this research highlights the need for a paradigm shift from technology-centered to learning-centered approaches, where developing and evaluating online programs for youth are driven by principles that focus on ways to foster youth engagement, and, in turn, youth learning or competence.

Existing Program Development Frameworks

Research frameworks exist that allow for studying the use of technology and the Internet in programming for youth. Some frameworks emphasize one or two aspects of program process monitoring (e.g., recruitment; Crutzen et al., 2009). Others are more broad-based yet focus on the value of certain research methods (e.g., participatory action research through the e-PAR model; Flicker et al., 2008). Although these frameworks are practical for different pieces of program development, more research is needed on "*if* and *how* these factors improve exposure [and…] possibly identify more factors [that are influencing program recruitment and retention]" (Crutzen et al., 2009, p. 7). As such, a more general framework that emphasizes developmental needs and contextually relevant material or activities is needed for studying online program development for youth. Revealing a comprehensive framework for online program development and planning, Hughes and colleagues (2012) emphasize the importance of first analyzing the problem that needs to be solved, and only then developing content, instructional activities and an implementation plan that address the issue at hand. Although this framework has been employed, and scholars have supported its use in program development research, this model for developing online programs essentially evolved from synthesizing best practices in the field rather than directly through empirical research, and it was not specific to youth. Nonetheless, it is a model that can be used to guide online program development. As such, I used Hughes and colleagues' model to guide the present study by examining youths' preferences for online program content (topics covered), instructional processes (online educational activities that promote learning and engage youth), and implementation (planning for program exposure and ongoing participation). Hughes and colleagues also emphasized the importance of developing contextually relevant content that appeals to diverse audiences; I also explored individual characteristics in this study in order to gain a better understanding of the unique attributes that youth bring to a given online program and to gain knowledge of the individual characteristics that should be included in future research related to program development or evaluation.

Online Program Evaluations

Content. Although the number of online programs for youth has increased in the last decade and they cover a range of topics, the numbers of online program evaluations that focus on problem behaviors outweigh those that focus on positive youth development. Examples of

problem behaviors targeted in online programs have included smoking (Patten et al., 2006), substance use or abuse (Croom et al., 2008), eating disorders (Celio et al., 2000), anxiety, depression, or stress (Currie, McGrath, & Day, 2010; Fridrici & Lohaus, 2008), diabetes maintenance (Gerber, Solomon, Shaffer, Quinn, & Liptson, 2007), or sexual health (Roberto et al., 2007). Programs that center on positive youth development, on the other hand, are those that promote competencies (e.g., social emotional, cognitive, behavioral) and help youth by fostering positive psychosocial characteristics (e.g., self-determination, self-efficacy, clear and positive identity) and "providing recognition for positive behavior [and…] opportunities for prosocial involvement" (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004, p. 102). There is empirical evidence that supports the claim that positive youth development outcomes facilitate the prevention of problem behaviors, such as alcohol and other types of drug abuse (Catalano et al., 2004). Although helping youth with specific problems is important overall and necessary for many youth, a review of the literature indicates that such an approach does not fully prepare youth as they transition to adulthood.

Many youth may develop problem behaviors, yet there are a variety of ways to help youth foster a healthy transition to adulthood. For example, the rising rates of unemployment among youth (Bureau of Labor Statistics, 2010), and low retention rates (57%) among first time college students (U.S. Department of Education, 2010) emphasize the need for youth to develop competencies that help them succeed in college work settings. Additionally, some researchers have found that contemporary youth experience "high rates of boredom, alienation, and disconnection" (Larson, 2000, p. 170). Further, one national poll found that nearly 83% of adults in the United States believe that many contemporary youth possess a "sense of entitlement" (Sacred Heart University, 2006). Other research has revealed that youth, specifically those grouped in the *Millennial* cohort, have less of a work ethic, moral values, and respect for others (based on reports from adults and youth themselves; Pew Research Center—Millennials, 2010). Some scholars may argue that some of the literature may reflect bias related to generational differences. Nonetheless, each of these characteristics may be manifested in the way youth interact with others both personally and professionally, and thus, a positive youth development program may focus on social competence, promoting effective communication, social problem solving, the ability to understand social cues, or setting/working toward future goals (Scott, n.d.)

to help youth succeed rather than exclusively focusing on drug or alcohol prevention. Thus, the present study focuses on developing online programs that emphasize positive youth development because of the research that has shown that positive youth development content offers the most potential to help youth acquire the knowledge, attitudes, and skills that will help them successfully transition to adulthood.

Instructional processes. Scholars believe that program content (or topics covered) may serve as the program foundation, yet the design, or instructional processes employed are equally critical (Hughes, 1994; Hughes et al., 2012). Online instructional processes may include teaching plans (e.g., activities or materials), the type of facilitation (e.g., self-study or group instruction), and the incorporation of multi-media (e.g., online videos and/or PowerPoint). Program designs vary, and research indicates that instructional strategies may influence effect sizes. For example, one review revealed that online programs with certain features (e.g., text messaging, automatic/tailored feedback, ask the expert) show larger effects (Webb et al., 2010). Although analyses linking instructional processes to effect sizes are rare, scholars have linked program characteristics to participant engagement and revealed that participants are critical of elements of design. For example, researchers have found that a program's usability, or a navigation system that is easy to use, is critical to participant engagement (Fu & Salvendy 2002; Stoddard, Augustson, & Mabry, 2006). Additionally, Fogg et al. (2003) found that nearly half of participants based their opinions of the credibility of a website on the overall appearance of the site. Other important elements of design include images of real people or multiple styles of photo manipulation (versus cartoon pictures only; Sleeswijk Vizzer, & Stappers, 2007) and color layout, which can elicit emotions and general interest from participants (Beaird, 2010). In addition, researchers have found that using a variety of instructional strategies at one time is useful (i.e., mixing chat and video; Weisz et al., 2007). As such, it is possible that youths' program exposure and retention are related to the instructional processes employed in the program, but more research is needed that explores these links. This is especially critical when one of the most common issues discussed in online program evaluations is recruitment and program compliance.

Recruitment and program compliance. Online program recruitment is important because in order to help youth, they need to first be exposed to the program. In addition,

program compliance has been associated with greater improvements on outcomes with youth (e.g., weight concerns, attitudes and behaviors surrounding eating disorders; Celio et al., 2000). Program recruitment strategies such as an hourly wage ($10 per hour; Currie, McGrath, & Day, 2010), tickets to a college sporting event (Croom et al., 2008), email reminders (Bingham et al., 2010), or other incentives are mentioned favorably in online program evaluations. Additionally, scholars make recommendations for using incentives, such as course credit, to enhance online program compliance among high school or college age youth (e.g., Celio, Winzelberg, Dev, & Barr Taylor, 2002), operating under the general assumption that youth need some sort of external motivation to continue participation although developmental scholars have found that extrinsic rewards have an undermining effect on intrinsic motivation in educational settings (Deci, Koestner, & Ryan, 2001). Although some of these evaluations have compared different versions or program models where they have tailored content and external incentives, their program designs have not allowed them "to determine which of the design changes may have contributed to higher compliance [between the models]" (Celio et al., 2002, p. 18). It is possible that the youth were engaged or motivated to participate by the characteristics of the program rather than the external incentives, and research is needed which explores these issues associated with recruitment and retention. Assessing how youth are exposed to an online program or how to maintain their interests can be especially challenging because they are all unique.

   Individual characteristics. Indeed, research exists that supports the notion that youths' preferences, or what motivates youth to participate in an online program, in particular, may vary by their uniqueness within demographic differences, technological access/experiences, or other personal characteristics. For example, scholars commonly use the term *digital divide* as an ambiguous descriptor referring to the differences between groups with technology access or experiences and those without. In this regard, researchers have found that individuals from working class or lower socioeconomic statuses (SES) have less computer access and are more resistant to using the computer and tools such as the Internet as education resources (Linebarger, Royer, & Chernin, 2003). Other research has shown, however, that youth who are poor and those with more financial resources had equal amounts of computer access and used the computer similarly for academic purposes (although poor youth were less likely to use the computer for purposes other than academics; Eamon, 2004). It is possible that the contradictions

across the digital divide literature are influenced by changes in modern technology, societal adaptations to the changes, and individuals' general perceptions of technology. Nonetheless, the research on the digital divide emphasizes the importance of technology access and user experiences to online program development.

In addition to differences related to access or financial resources, researchers have found differences in male and female youth's preferences for online activities (Hall, 2006) or acceptance of training at large (Fridrici & Lohaus, 2008). Program evaluators have reported collecting information on a variety of individual characteristics (e.g., education, number of children, personal insurance, unemployment, public assistance, or computer use/experience; Gerber et al., 2007). Their analyses of these demographic, or individual, characteristics, however, do not go beyond descriptive statistics, and individual characteristics may directly or indirectly influence online program evaluation outcomes in a variety of ways. Individuals may differ in their preferences for online program characteristics and therefore, personal motivation for participating (initial exposure and retention) in a given program may vary. In other words, individual characteristics may influence whether or how youth are engaged in a particular online program, and their engagement may influence outcomes (e.g., knowledge, attitudes, skills or behaviors). These relationships, however, have not been fully examined in existing online program evaluations with youth, highlighting the need to begin to explore the role of individual differences in online program development research.

In summary, there is a need for a comprehensive theory about the development of online programs that engage youth. Specifically, online positive youth development programs are needed for older youth. Programs that emphasize positive youth development are less likely to require youth to participate than programs that focus on problem behaviors (i.e., college freshman mandated to attend an alcohol abuse prevention program), making their use less feasible to many youth.

Following general best practice guidelines for developing online programs (Hughes et al., 2012), empirical research is needed that will link youth's individual characteristics and their preferences for program characteristics. Thus, the present study will be used to inform a theory about reaching youth and engaging them in a manner that encourages their ongoing participation

in online programs. Based on the literature, the following general assumptions served as a guide for this research in the area of online program development for youth:

- Identity formation is a key developmental task for youth, and although older adolescents are more independent than younger peers, they still need guidance during the transition to adulthood.

- Programs that focus on positive youth development rather than specific problems offer the most potential for helping older adolescents during their transition to adulthood.

- Youth, specifically those who are 18-20 years old, have choices, so a knowledge and understanding of how to develop programs that engage youth is critical to practitioners' successes for both reach and impact.

Goals of the Present Study

The purpose of this study was to: 1) explore relationships between and among older adolescents' individual characteristics (e.g., demographic characteristics, Internet access, learning styles, experiences, and motivation or beliefs about online programs) and their preferences for program characteristics, and 2) provide an explanation for the various ways in which youths' preferences for program characteristics influence or effect online program participation by adolescents. I chose to focus on older adolescents because they are difficult to reach through traditional program delivery, yet still need guidance as they transition to adulthood. Additionally, younger youth cannot speak on life as an older adolescent, yet older youth can retrospectively speak about their experiences as younger adolescents and thus, they offered the most potential for gaining an understanding of developing online programs that engage youth at large. This study addressed gaps in the literature related to online programming for youth by taking a comprehensive, youth-centered developmental approach to online program development with a specific focus on positive youth development. Two main research questions guided this work:

Research question 1: What kinds of online program characteristics most interest older adolescents? In addressing this question, I also carefully considered how youth described their preferences, examining the ways that their individual characteristics and experiences uniquely influenced their preferences for content and online activities or design at large.

Research question 2: How do older adolescents' preferences for program characteristics influence their exposure to and participation in online programs? Because a comprehensive framework for developing online programs for older adolescents is missing from the existing literature, I believed it was important to explore links between youths' preferences for online program characteristics, online program exposure, and their ongoing participation in online programming. An analysis of the links between each of these constructs is necessary to contribute to a comprehensive theory about developing online programs that engage youth.

Chapter Three: Methods

Data were collected through qualitative research, and the overall aim was to contribute to a comprehensive, grounded theory about developing online programs that engage youth. The present research design was based on the work of Strauss and Corbin (1998), who assert that theory evolves from the data, research questions largely focus on process, and the research design becomes more focused throughout the data collection process. This study involved four main stages beyond an initial demographic questionnaire. An electronic questionnaire was sent to all of the youth who responded to initial recruitment efforts (emails and flyers). Participants were required to 1) be 18-20 years old, 2) have access to the Internet and email, and 3) speak and read English. The individuals that were eligible based on this criteria ($n = 39$) were invited to participate in stage one, in-depth interviews. Twenty-seven of the thirty-nine participated. Open-coding was used to analyze initial interviews. Stage two involved axial coding, providing an explanation for categories or themes identified in the open-coding process. During stage three, participants who completed interviews ($n = 27$) were asked to review two online programs, and all but five elected to do so ($n = 22$). Throughout stage three, I continued open and axial coding, but also began selective coding, including more details and validating or discounting cases. In stage four, I conducted formal member checks, at which time participants ($n = 15$) reviewed a one page summary of the analysis. More details on each stage are discussed throughout the remainder of this section.

Data Collection and Analysis

Data were collected from a diverse sample of older adolescents (18-20 years old) across one region of a Midwestern state (Coles and Champaign Counties in Illinois). This region was chosen because of the convenience of the proximity and because the academic diversity in both counties allowed for purposeful, theoretical sampling (e.g., intentionally selecting participants based on the literature review and research questions); although Coles county is considered rural and Champaign metropolitan, both have high school youth or youth that do not attend college at all and together, they house two Universities and two community colleges, which draw older adolescents from other communities. Qualitative methods are unlike quantative methods in that they often involve purposeful sampling to ensure information-rich cases are included in the data (Patton, 2002). Theory-based, or theoretical, sampling is purposeful and grounded theory

scholars believe that theoretical sampling and the iterative process involved is important in developing a meaningful understanding of all of the facets related to a category or concept (Glaser & Strauss, 1967). As such, in this study, theoretical sampling helped to ensure a diverse sample in terms of educational status (including not in college), sex, age, and technology access/experience. Grounded theorists believe that this technique in which sampling and questions become more specific as the researcher saturates categories is important, especially when the goal is theoretical saturation (Corbin & Strauss, 2008).

Theoretical saturation is a technique that is consistent with "qualitative power analyses" used by grounded theorists (Onwuegbuzie & Leech, 2007; Strauss & Corbin, 1998). In this study, categories were saturated when no new information emerged from coding, and this process was used to determine when to stop collecting data. I knew I had reached saturation when the data from interviews were not producing any new categories and "no new properties, dimensions, conditions, actions/interactions, or consequences" (Strauss & Corbin, 1998, p. 136). From the analysis, I was also able to richly describe each of the categories and essentially, validate them with new cases, as well as the member checks. Because of the relationship between theoretical sampling and saturation, the participant recruitment process was important.

Participant recruitment. Initially, participants were recruited through mass emails and flyers. Key informants (e.g., leaders from student organizations, teachers, professors, or administrators) from high schools, vocational schools, alternative schools, work force development offices, community colleges, and universities were identified and asked to help recruit participants by forwarding recruitment emails to their list serves and by posting flyers. Informational flyers were posted on university and community college campuses, at work force development sites, unemployment offices, libraries, and other public places in both Coles and Champaign Counties (see Appendix A for flyer). Flyers and recruitment notices indicated the eligibility criteria (between 18 and 20 years old, access to email and the Internet, and the ability to speak and read English). If individuals met the criteria and were willing to participate, they were emailed a link to a 20-item demographic questionnaire, which was hosted by Survey Monkey and included information about their age, sex, ethnicity, marital/relationship status, education, family background (e.g., family education and affluence), and computer access among other things (see Appendix B for electronic survey questions).

All eligible participants were given a detailed description of the study and required to consent to participation prior to beginning the electronic demographic questionnaire (see Appendix C). Those who agreed to participate in the interviews and followed through with the process were diverse in terms of age, sex, and college status (e.g., community college, University students, and freshmen through seniors). Theoretical sampling was employed as open coding and axial coding began. For example, all of the participants I initially interviewed were college students. To gain a better understanding of processes related to youths' exposure and ongoing participation in online programs, I needed to also include those who were not in college. To reach youth who were not in college, I repeated the same recruitment procedures, but added the criteria "not in college"; I sent emails and flyers through the same key informants, with the exception of community colleges and Universities. This theoretical sampling process allowed me to assess whether or not online program recruitment and retention for youth who were not in college would be the same as for those who are in college.

Incentives. Participants in this study were offered a $20 gift card (they were given a choice of a Target, Amazon, or Best Buy gift card) for their efforts at the completion of each stage. Steps one and two (online survey and interview) both had to be completed to earn the first $20 gift card. Participants who also completed step three (program reviews) earned an additional $20 gift card. Participants who completed steps one, two, and three were then invited to participate in step four (member checks) and earn an additional $20 gift card. Therefore, there was an opportunity for each participant to receive $60 total throughout the duration of the study and all gift cards were sent to them via email within 1-2 weeks of completing a given step.

Data management. All interviews were audio-taped. I typed transcriptions, which were cross-checked by two trained undergraduates, who each received three college research credits for assistance with this project. Each participant was given a pseudonym (that they chose); these pseudonyms were used in transcripts, memos, and written reports. All other identifying information was removed. All handwritten notes, printed documents (e.g., email conversations), and consent forms were stored in a locked file cabinet in my campus office. Transcribed data were shared in aggregate form only, and only trained project personnel had access to data files. All transcriptions were uploaded into NVivo, a software tool for managing qualitative data. I then coded and compared data using NVivo throughout each stage of the analysis.

Stages of analysis. Analysis began immediately after the first interview with the first participant, and data collection and sample recruitment continued until theoretical saturation was achieved. Grounded theory methodology requires both deductive and inductive, circular coding and analysis and constant comparisons among data and theoretical categories as they are established. Grounded theorists believe that coding involves the proposition of categories and the various links between them and a validation of the information through constant, theoretical comparisons (Strauss & Corbin, 1998). Initial open coding involves microanalysis ("detailed line by line analysis"; Strauss & Corbin, 1998, p. 57) and organizing data to general categories, which depict problems or phenomena important to that being studied. Through this process, researchers highlight themes and concepts, grouping the concepts into common categories and subcategories, or properties of the categories. Following Strauss and Corbin's (1998) grounded theory model, I used axial coding and selective coding to analyze each theme and category further. Each of these stages of analysis are described in detail in this section. It is important to note, however, that in grounded theory, data collection and analysis are not two separate stages, rather researchers should rely on the constant comparative method (i.e., going back and forth between data collection and open, axial, and selective coding). This is important because interpretations are subject to revision as data accumulates and should not be set in stone; in fact, "new insights and subsequent changes in the analytic scheme often occur right up to the end of the study" (Corbin & Strauss, 2008, p. 197). As such, the present study involved four stages of simultaneous data collection and analysis beyond the initial demographic questionnaire, and saturation occurred when I was confident that more interviews or information from the participants would not provide additional insights into the results of this study. This was determined through ongoing analyses of participants' words, phrases, attitudes, experiences, and preferences, beginning at stage one with the initial open interviews.

Stage one: Initial interviews and open coding. The first stage of data collection and analysis involved two steps. First, face to face, semi-structured in-depth qualitative interviews were conducted (see Appendix E for initial interview protocol). Second, I used open-coding to analyze the interviews ($n = 27$). The semi-structured interviews allowed me to collect answers to specific questions about participants' online experiences, their definitions of online programming, and their preferences for program characteristics, exposure, and ongoing

participation. I began the interviews with the purpose of my study, asking participants their definition of online programming and how they had participated in online programs. Then, I focused on topics of interest to them by asking them to describe issues that are important to them, their daily struggles, positive experiences, negative experiences, strengths, weaknesses, and the types of program content that would be most helpful to them in their future roles. Without probing, almost all of the youth mentioned work, college, careers, relationships, and world views (e.g., politics or religion) as topics they wanted to learn about; if they did not, however, have answers or did not initially bring any of these issues up, I asked them to talk about these issues as the interview progressed (this focus was based on the work of Arnett, 2000; 2004). For example, I asked participants to describe some of the issues that they (or people their age) were most concerned with, and I asked them what types of issues impacted their daily lives; if they did not talk about romantic relationships with initial questions, I asked them about their relationship status and experiences. I also asked participants to describe their views about the Internet, their preferences regarding anonymity, the types of instructors they prefer in online learning environments, their preferences for incentives, their thoughts about advertisements, the types of online activities in which they participate regularly, and why they participate in the online activities that they do.

Taylor and Bogdan (1998) believe that in-depth interviews should be used when the researcher's interests are clear and/or when she/he needs to study a broad range of people (compared to when the researcher's interests are not clearly defined and exploring through focus group methodology may lend help in refining data *or* studying a small, specific group of people where participant observation might be a better fit). To gain insight from the interviews, this process requires "getting to know people well enough to understand what they mean and creating an atmosphere in which they are likely to talk freely" (Taylor & Bogdan, 1998, p. 92). Therefore, one to two-hour interviews were conducted face to face in a public place with which both the researcher and participant felt comfortable. Participants differed in their ability to express their views or ideas, which was expected (Taylor & Bogdan, 1998). As such, some interviews took longer than others, but on average, each interview with the participants lasted about 90 minutes. The interviews were appropriate for the grounded theory methodology proposed here as they allow for rich insight, discovery, and flexibility at the same time.

Subjects that completed the initial online survey were invited to participate in the interviews. In general, it is recommended that 20-30 participants are required for interviews in a grounded theory study (Cresswell, 2005; Onweugbuzie & Leech, 2007) although the sample in this study relied on theoretical saturation. Of the 39 youth that completed the online survey, 27 completed initial interviews. Because data from initial interviews revealed some focus on college or school work, I purposefully recruited participants who were not in college by sending mass emails and posting flyers with this revised criteria to ensure the sample included diversity with regard to educational status.

Following each interview, I wrote a memo, which included interpretations of participants' responses in addition to my impressions of, or reactions to, the participants. All memos became part of the data collected through the interview process. Memos are essentially "written records of our analysis" (Corbin & Strauss, 2008, p. 117). According to Corbin and Strauss, they can be used for identifying concepts, categories, actions, conditions, or consequences and relationships between them. For example, after some of the initial interviews I began to notice patterns in the language youth used to describe their online experiences (e.g., they were not clear on what constituted a "online program," but related to the term "website"); I made note of this in memos. I used memos throughout each phase of coding to define categories that were emerging, refining them and noting when they validated or discounted previous cases. For example, during two of the initial interviews, I saw the use of online magazines emerging as a theme. Although this pattern did not continue, I used both the transcripts and the memos to analyze the discrepancies regarding online magazines. I believe the terminology that I used in initial interviews caused participants to think of magazines rather than what they actually prefer or use when they want information or need help. For example, I asked participants to tell me where they go for relationship advice as they were talking about relationship issues. During the first two interviews, however, I made the mistake of providing examples by saying "such as online magazines, newsletters, or certain websites?" As such, I created another memo that described the relevance of the language used, including providing too many examples and was subsequently more careful in my wording in later interviews. Additionally, the memos allowed me an opportunity to reflect on my own thoughts and bias regarding participants and their online experiences. For example, I felt annoyed with one participant when he was late for the interview

and provided short descriptions and responses to me, which I thought was a reflection of his enthusiasm about participating; by highlighting my frustrations in a memo, I was able to vent and subsequently realize while analyzing the person's transcript that his short responses to me were a result of my closed-ended questions. Thus, the memos helped me to refine my skills as an interviewer.

I began initial, open coding immediately after the first interviews. Coding and data collection, however, occurred simultaneously. Open coding helps to break up the data into pieces, examining similarities and differences and identifying categories and differentiating among categories (Strauss & Corbin, 1998). For this study, some of the initial categories pertained to individual characteristics (e.g., from demographic questionnaire or interviews), engaging online program content (e.g., when the participant identified a particular worry, concern, interest, or topic they wanted to learn more about or searched for answers to online), or engaging technological tools (e.g., when a participant discussed a particular way she/he learns or the type of technology or multimedia tool that she/he currently uses). Flexible open coding occurred during initial analysis of interviews and specifically, the categories that emerged and their definitions, allowed for stage 2, *axial coding,* which began after I had completed 10 interviews.

Stage two: Axial coding. With axial coding, "the grounded theorist selects one open coding category, positions it at the center of the process being explored (as the core phenomenon, and then relates other categories to it" (Creswell, 2005, p. 298). I used axial coding to link multiple categories and subcategories that were identified during open coding. The axial coding stage is where the researcher begins to analyze the process, discovering a paradigm model. In this study, I identified links between individual factors, program characteristics, and online program exposure and retention. Definitions of terms for axial coding are outlined in table 1 and taken directly from Strauss and Corbin's (1990) work. Axial coding is a detailed form of coding, which allows researchers to analyze phenomena that arise from open coding and provide a conceptual explanation for some process surrounding the phenomena. According to Strauss and Corbin (1990), a paradigm model may look similar to that in Figure 2 below.

Table 1

Definitions of Terms for Data Collection and Analysis Taken Directly from Strauss and Corbin's 1990 Version of the Book, Basics of Qualitative Research

Term	Strauss and Corbin's Definition
Axial coding	A set of procedures whereby data are put back together in new ways after open coding, by making connections between categories. This is done by utilizing a coding paradigm involving conditions, context, action/interactional strategies and consequences.
Causal Conditions	Events, incidents, happenings that lead to the occurrence or development of a phenomenon.
Phenomenon	The central idea, event, happening, incident about which a set of actions or interactions are directed at managing, handling, or to which the set of actions is related.
Context	The specific set of properties that pertain to a phenomenon; that is, the locations of events or incidents pertaining to a phenomenon along a dimensional range. Context represents the particular set of conditions within which the action/interactional strategies are taken.
Intervening Conditions	The structural conditions bearing on action/interaction strategies that pertain to a phenomenon. They facilitate or constrain the strategies taken within a specific content.
Action/Interaction	Strategies devised to manage, handle, carry out, respond to a phenomenon under a specific set of perceived conditions
Consequences	Outcomes or results of action and interaction

Figure 2

Strauss and Corbin's (1990) Simplified Model of Axial Coding

(A) Causal Conditions ⟶ (B) Phenomenon ⟶ (C) Context ⟶

(D) Intervening conditions ⟶ (E) Action/Interaction strategies ⟶ (F) Consequences
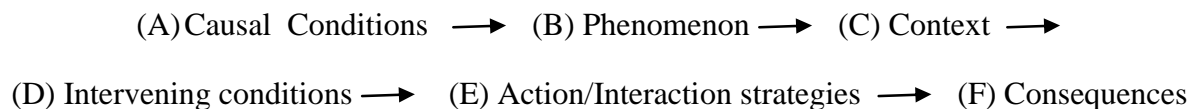
During the axial coding stage, the aim was to link categories as outlined in Strauss and Corbin's (1990) model. For example, I labeled specific ideas, events, occurrences, or incidents in order to identify several phenomena from the data. Then, I labeled possible causal conditions, context, intervening conditions, action/interaction strategies, and consequences that surrounded each phenomenon. This stage of data collection and analysis involved making assumptions and proposing concepts from the data. See Tables 2 & 3 for the paradigm that began to emerge after analysis of the first 10 interviews as I followed Strauss and Corbin's model.

Table 2

Emerging Paradigm on Program Content that Engaged Participants

Strauss and Corbin's Terms	My labels
Causal conditions	Personal interests or hobbies, experiences and interactions with others, current roles, strengths, geographical limitations
Phenomenon	**Preferences for content/topics**
Context	Leisure, entertainment, work/careers, college/school, relationships
Intervening conditions	Social support network, age, relate to speaker/author, internal motivation, existing knowledge, cognitive skills, existing knowledge of a given topic, nature of the topic itself, confidence in own abilities, views about technology
Action/interaction strategies	Utilize search engines, don't search for information, participate in online programs, repeat visit
Consequences	Engage with online content, don't participate at all, find answers to specific questions, participate short-term

Table 3

Emerging Paradigm on Technological Tools that Engaged Participants

Strauss and Corbin's Terms	My labels
Causal conditions	Habitual, having a voice, feedback (receiving feedback from others and seeing others' feedback), entertainment, speed, frequency and consistency of updates, be a part of a group, personal interests, solidarity, general format/design, relate to a speaker/author
Phenomenon:	**Preferences for technological tools**
Context:	Topic, friendship, connections with people in general
Intervening conditions	Financial resources, technological skills, social support network, time
Action/interaction strategies	Read information online, participate in online program, repeat visit
Consequences	Engaged with online content, participated short-term, repeat visits

These initial paradigms for online program content and technological tools emerged from coding within each participants interview transcripts. For example, Cara said wanted more help finding volunteer opportunities related to her field of interest. She described what she had went through the summer before and said, "I just went to Google and I typed bilingual districts' because my town didn't want volunteers because we are kind of like a white town…so my mom knew of some [schools that might need bilingual speakers]." In Table 4, I outline an example of the axial coding process with this piece of Cara's transcript. In this case, Cara's geographical limitations and her existing skills as a bilingual speaker who could tutor young children caused her to search for these volunteer opportunities. In the discussion with Cara, she said that volunteering was important for her career and future plans. An exception to most participants, Cara said that (at the time of the interview) she only used the Internet for information related to work or school. Thus, Cara searched online for information about volunteer opportunities in the context of future plans (rather than leisure or something mandated for school). One of the intervening conditions in this case was her mom, which I categorized as a *social support network* in this case. If Cara's mom had not told her that there were other nearby bilingual schools that did needed volunteers, she may not have searched for them at all. With her mom's suggestions, Cara searched for the information on Google and ultimately found the answer she needed. I followed this model of axial coding for all participants, and through selective coding, I repeated it, refining categories and definitions.

Table 4

Example of Coding Transcripts

Axial Coding Model Terms	My Coding
Causal conditions	Geographic limitation/bilingual speaking skills
Phenomenon	Volunteer opportunities
Context	Work/Career and future plans
Intervening conditions	Social support network
Action/interaction strategies	Used search engine
Consequences	Found answer to specific question

.

***Stage three: Program review form and selective coding*.** Following the interviews, each participant was asked to review two online programs (*Real Teen Relationships;* www.realteenrelationships.com and *That's not Cool;* www.thatsnotcool.com) at their convenience (on their own time and in their own space) after they completed the interviews with me. I chose these online programs because they both focused on positive youth development, specifically the fostering of healthy relationships. Additionally, both programs utilized a variety of technological tools or multimedia (e.g., photos, videos, blogs, links to Facebook or Twitter, videos, games, interactivity, and quizzes). At the end of each interview, I introduced the form participants would use to review two online programs (see Appendix F for program review form); I went over some key points related to the form and answered any questions that arose. Following the interview, I emailed the form to participants, and gave them explicit instructions on what to do to review the two programs. The participants who responded to my email and completed the review guide (*n* = 22) answered questions in a Microsoft Word document and did so on their own time, returning the form to me via email when finished. The rationale for the use of email at this stage was the same as it was for the use of the electronic surveys. The purpose of this stage of data collection was not to conduct a formal review of the two online programs, but rather the reviews conducted by participants served as another method of analyzing logical links between participants' preferences for program characteristics, exposure, and ongoing participation. I thought that by asking them to respond about program characteristics they preferred when they were online and viewing an online program, a richer description of participants' preferences would emerge from the data.

In order to analyze the data, completed review forms were uploaded into NVivo, and memos were recorded in the same manner described in earlier steps. I continued to use open and axial coding, but also began to use selective coding, where "the grounded theorist writes a theory from the interrelationship of the categories in the axial coding model" (Creswell, 2005, p. 398). The specific categories, events or experiences were named in the axial coding phase, while links were clearly defined and narrowed down in the selective coding phase. Although the review forms did not inform selective coding more than interviews or memos, selective coding began about the same time I began receiving participants' completed review forms. In other words, as I collected the review forms from participants, I was also doing more interviews, and going back

and forth between open, axial, and selective coding across the interviews and program review forms; the analysis become more focused through the constant comparative methods. During selective coding, I included more details about each category in the paradigms introduced in the last stages and sometimes values were attached to them. For example, I began to notice the role of incentives and specifically, the importance of engaging delivery styles for internal incentives. Selective coding helped me to understand that certain program characteristics (e.g., social networking platforms and entertaining style) are necessary to engage some youth at all and others with specific topics (e.g., young men on the topic of romantic relationships). If there were multiple ideas about one or two phenomena in the previous stages, the analyses were then refined, and either validated or discounted during selective coding. Strauss and Corbin (1990) state that with this methodology, "there is a constant interplay between proposing and checking [, and…] this back and forth movement is what makes our theory grounded" (p. 111). This constant interplay is also necessary for stage four, which involved member checks.

   Stage four: Member checks. The last stage of data collection involved completing membership checks to validate research findings. In this study, I emailed a one page summary of the results to each participant and asked them to confirm results or refine interpretations. Researchers believe that the quality of the data improves through this process, even if participants disagree with the initial report of research findings as "this can enhance your understanding of their perspectives (Taylor & Bogdan, 1998, p. 159). Participants, who completed the member checks ($n = 15$) sent their feedback to me via email. Results were coded and memos were written as they were in earlier steps. Participants' favorable responses to the one page summary and their additional comments provided the validation for the constructs. In addition, no new properties or dimensions emerged from member checks, and I became even more confident that the data analysis included enough details, yet was comprehensive enough that it accounted for much of the possible variability among participants' responses. As such, I determined after completing member checks that the I had reached theoretical saturation and no new data needed to be collected.

Establishing Trustworthiness and Theoretical Sensitivity

   Although validity, reliability, and objective accounts of the data are characteristic of quantitative research, *establishing trustworthiness* is more commonly used by interpretive,

qualitative researchers to describe the scientific approaches used to ensure truth or quality of qualitative analysis (Denzin & Lincoln, 1994; Lincoln & Guba, 1985; Sandelowski, 1993). In the present study, I employed three main strategies to establish credibility in the truth of the findings. First, in addition to my constant comparisons between open and axial coding, I obtained peer debriefing and support from a team of scholars who reviewed my methods and analyses; each of the professionals (three graduate students and two University professors aside from my dissertation committee) have extensive experience in youth development, online programming, and/or grounded theory methodology. Second, during the selective coding phase, I reexamined every participant's interview transcript, program review form, and memos to ensure no case disconfirmed my analyses; during this process, I made revisions to the definitions of the categories by using broader definitions or different terms to describe the results. Lastly, both informal (e.g., paraphrasing or clarifying information with participants in interviews; having two undergraduates cross-check interview transcripts) and formal member checking (e.g., sending participants a one page summary of results) provided validation and confirmation of the facts, as well as my interpretations of the data.

Although grounded theory scholars have emphasized the importance of discovery of the concepts from the data (rather than the researcher's prior knowledge), researchers are expected to know the literature in the given areas, or be engaged in a field of study, and thus, it is possible for bias to occur (Strauss & Corbin, 1990). I have a bachelor's and master's degree in a family services field, professional experience working with youth, and have research and professional experience in the area of online programming. Although many important concepts surrounding online program characteristics arose during the initial literature review for this study, I remained flexible and open minded throughout the duration of the study. The detailed memos allowed me to continuously assess my own bias, and the constant comparative methods (e.g., selective coding and validation via member checks) prevented excess bias in this study. As such, new themes and categories, and links between them, arose from the analysis and contribute to the existing body of literature regarding online programs for youth.

Managing Field Relations

I interacted with participants at each stage of this research. I have extensive academic training in human and community development and professional experience that enabled me to

build a rapport with individuals from a variety of backgrounds. Because of my training and experience working with youth, I understand this stage of development involves insecurities, identity confusion, and exploration. With this in mind, I tried to make participants feel as comfortable as possible in the interviews by thoroughly explaining the study in words they could understand (e.g., avoiding technical jargon). I also discussed the purpose of the audio transcriptions prior to initiating audio recording. Further, I listened carefully and used empathy with participants, whether they were talking about daily irritations or major life events with which they struggled. Additionally, participants chose a location for the interview with which they felt most comfortable. They also chose their own pseudonyms, and I told them I would share the results of my study with them when finished (post member checks). Although the purpose of this research was to contribute to a theory about engaging youth in online programs, I would also like to use their feedback in outreach efforts; I explained this to the participants and told them how I believed in the importance of including youth in all stages of the program development process, and they appeared to appreciate this and seemed more willing to help me when I explained this. I acknowledge, however, that being an adult, Caucasian, female, and a university student may have been a barrier to participants' openness or ongoing participation. For example, four of the five participants who completed interviews but not website review forms were Caucasian male, community college students, or individuals who were not in college at all. Although I purposefully tried to make all participants feel comfortable by complimenting them (e.g., by saying, "you should be really proud of all that you are doing," or "this information is really helpful…I had never thought of that"), my sex, status as a university student, or age may have been either intimidating, or a barrier in their willingness to discuss issues. Thus, I acknowledge the potential that my role as the interviewer and researcher impacted participation and drop-out rates.

Chapter Four: Results

This chapter presents the results of an analysis of 27 interviews with older adolescents (18, 19, and 20 year olds), 22 of which also completed program review forms which provided additional insight on their preferences for program processes. The central research questions were designed to provide a better understanding of 1) the types of program characteristics preferred by older adolescents and what factors influence these preferences and 2) how older adolescents' preferences for program characteristics influenced their exposure to and participation in online programs. First, I begin with a description of participants. Second, I organize and present the findings according to the research questions, including a description of a four stage model for developing online programs that engage youth, which emerged from the data and the constant comparative methods. Finally, I describe the distinct knowledge gained from the program reviews and member checks.

Sample Description

Thirty-nine 18-20 year olds completed the online survey after one month of recruitment efforts. Of the initial thirty-nine subjects, twenty-seven participated in the in-depth interviews and were then asked to complete the online program review forms. Twenty-two of the twenty-seven participants completed the online review forms and all but seven of those ($n = 15$) also completed the last step of the study, the member checks. The descriptive data presented here was gathered from participants who, at minimum, completed the in-depth interviews. The data from these participants were included in the data analysis process, as were data from those who also completed the program review forms and member checks. Those who completed the online survey only were not included in the analysis. For a complete descriptive breakdown of participants who completed 1) the online survey only, 2) the online survey plus the interviews, and 3) the online survey, interviews, and program review forms, as well as other descriptive data, see Table 5.

Table 5

Description of Sample

Demographics	Online Survey Only	Online Survey + Interview only (no website review forms)	Online Survey + Interviews + Website Review Forms
N	12	5	22
Age			
18 years old	42%	40%	27%
19 years old	50%	40%	59%
20 years old	8%	20%	14%
Gender			
Female	58%	20%	73%
Male	42%	80%	27%
Ethnicity			
African American or Black	8%	0	0
Asian or Asian American	8%	0	17%
Caucasian or White	59%	100%	73%
Hispanic, Latina or Latino	8%	0	5%
Other	17%	0	5%
Hometown/County*			
Metro	25%	60%	77%
Nonmetro	75%	40%	23%
Children	20%	40%	0
Current college status			
Not in College	-	40%	5%
Community College	-	60%	18%
University	-	20%	77%
Mom_NO bachelor's degree or higher	92%	60%	45%
Dad_NO bachelor's degree or higher	83%	60%	45%
Family Affluence*			
Low	8%	20%	0
Medium	42%	20%	23%
High	50%	60%	77%
Spend at least 2 hours/day on Internet	83%	40%	91%
Most used device to access Internet			
Cell phone	8%	40%	0
Desktop	8%	40%	9%
Laptop	84%	20%	91%

Note: County codes were determined by rural-urban continuum codes, where youth were either determined from metro (1-3) or non metro (4-9) counties in Illinois:
http://www.ers.usda.gov/Data/RuralUrbanContinuumCodes/2003/LookUpRUCC.asp?C=R&ST

=IL; two participants were from major cities in China and thus, were put into the metro category. Further, family affluence was calculated for each participant based on his/her response to 4 items (cars/family, own bedroom, family vacations/year, computers in home). Composite family affluence scores were calculated using a 3 point ordinal scale where affluence is: low = score of 0, 1, 2; medium-3, 4, 5; high=6, 7, 8, 9 based on the family affluence scale (Boyce et al., 2006).

Participants who completed the in-depth interviews were 18 ($n = 8$), 19 ($n = 15$), or 20 ($n = 4$) years old. Although the sample was largely Caucasian ($n = 21$), individuals who identified as Asian or Asian American, Hispanic or Latina/o, and "other" ethnic groups also participated. The young women ($n = 17$) and men ($n = 10$) also came from diverse backgrounds (e.g., grew up in metro and nonmetro counties, had high-low family affluence, mother/father college educated or not). Participants' own educational statuses were also diverse (e.g., university student, community college student, high school student, or not in school at all). Although most participants had no dependents, two had at least one child. Further, the majority of the participants ($n = 22$) reported that they spend at least two hours a day on the Internet, and the majority ($n = 21$) also accessed the Internet via a laptop computer (rather than a desktop or via their mobile phones). Participants also had a wide range of technical skills. Thus, the sample was diverse on several levels, which allowed for a comprehensive analysis of the research questions.

Research Question 1: What Kinds of Online Program Characteristics Most Interest Older Adolescents?

Engaging content. From the analysis, engaging content emerged as a theme. The kinds of content in which participants were interested in (see Table 6) are fairly consistent with developmental theories on identity and exploration in emerging adulthood (Arnett, 2000, 2004; Erikson, 1963; 1968). Themes across the data in this study revealed that all of the youth (18, 19, and 20 year olds) were most interested in gaining knowledge about *work and career* paths or related opportunities. Additionally, all participants found themselves in positions that required knowledge of *life skills* (e.g., financial management, prioritizing) and *social skills* (e.g., communicating with bosses, professors, and individuals their own age), and many, but not all, recognized the need for programming in these areas. Many participants also expressed interest in receiving guidance in their *romantic relationships* and learning facts related to, or even debating, *world views*.

Table 6

Engaging Content, Conceptual Categories, Definitions, and Examples

Conceptual Categories	Definitions	Examples
Engaging Content	Topics participants were interested in learning about or searched for answers for online because of their daily concerns, experiences, and conversations with others	
Work/careers	Participants' descriptions of daily concerns, issues, or desires to learn how to be successful in work/career-related roles or explore options for career paths	Defining and learning how to network (i.e., how to prepare for job/career fairs), disadvantages/advantages of certain professions (i.e., perspectives of people in the field), the job application process (i.e., writing resumes)
Life/social skills	Participants' descriptions of daily concerns related to life or social skills	Financial, stress, or time management, life balance, communicating with professors or in employment-related settings
Romantic relationships	Participants' descriptions of wanting to learn more about what others want or how to cope with daily experiences or interactions with partners or potential partners	Advice, what is attractive/unattractive, reading mixed signals, navigating and coping with mind games, wanting to know what others (i.e., partners or perspective partners) were thinking, communicating (via text vs. Face to Face) with existing partners
World views	Participants' descriptions of exploring their world views or gaining facts related to religion or politics so that they could have knowledge or be more confident in their conversations or debates with others	Facts about different religions, sexuality, abortions, national issues, or issues that impact them directly (i.e., issues in their schools, colleges, universities, or communities of interests)

The participants in this study discussed these as topics they engaged in or searched for answers for because of their daily experiences, concerns, and conversations with others. Individual differences in skills, assets, and recognition (of the need for program) were evident in the data. Each of the categories focusing on youths' preferences for program content that emerged from the interviews are discussed in this section.

Work and careers. Work and careers was the most commonly coded topic under participants' preferences for online program content as *all* participants discussed their daily concerns or issues, interests, or desires to gain knowledge or skills related to work and or careers. When I asked them to elaborate and describe exactly what they would be interested in learning in order to help their work or career paths, common responses were "having a list of jobs and like what's available" (Marilyn), "if you could put in your interests and it could list some career options you can have or a list of employers" (Maggie), "how to write a better resume or how to look for a job" (TP), "just more information on what I can expect" (Max), or "help you figure out what it's going to be like when you actually get a career" (Alma). Participants were particularly interested in exploring career possibilities, identifying advantages and disadvantages of professions that might be a fit with their personal and professional goals, and learning how to accomplish specific tasks that they know to be important for their work or careers. For example, many participants, such as Alex and George, acknowledged their awareness of the importance of networking, but they did not know how to do this. Alex stated, "well everyone really makes such a huge deal about networking at this point in the game. It's really something people want you to do with very little instruction on how to." George gave a specific example related to his struggles at a job fair and stated,

> I just wrote a resume a couple of weeks ago. There were a couple of engineer fairs I went to. I felt completely overwhelmed and unprepared. I knew how to dress, but I still felt a little under-dressed. I didn't know what kind of questions to be asking, or how to present myself to the recruiters….I just got kind of thrown into it. I would definitely like some sort of guide to going to something like that and succeeding. But later on, (assuming that I have those skills by like junior and senior year), going out of college I would probably want more information along the lines of how to network yourself, how to meet people and make an impression and have them as a reference, how to find the type of companies you're looking for and how to make yourself noticeable to them.

It was evident that George knew the career fair would be important, but he did not fully understand what he was supposed to do or how to act there. George appeared confident that he would learn the networking skills with time, and he was aware of the fact that in a few years, he would need different kinds of information.

The analysis revealed that many were, in fact, in different stages, or on different tracks with work and careers. Thus, their interests and searches for work and career related information varied considerably, and a number of factors influenced these differences. For example, Kaitlin was an 18 year old single mother, who had attended one semester at a community college and dropped out because school work was difficult to manage with employment and other priorities. She stated,

> I actually research my careers. I'm in the middle of trying to decide what I want to do with my life. I have a general idea about how to become a Doctor, but I haven't decided on which field of study for sure. If there's a little section [that comes up on Yahoo when she checks her email] that says "which jobs make the most money" or "10 jobs you'll love", I'll click on it just to see if something will appeal to me.

Although Kaitlin believed she wanted to be a doctor, her searches reveal that she is still in search of a career path that matches her financial needs and personal interests. Artemis, on the other hand, who also wanted to become a doctor, stated,

> I plan to pursue a career in medicine so I'm always actively reading things either in the scientific arena or in the medical world … but I'm also interested in getting perspectives from people in the field…so doctors giving personal opinions of what they feel like they are doing and their own opinions of whether or not this is worth it, what do they think about the industry, and just being a member of that kind of industry…things like that.

Thus, both females were interested in becoming a doctor, yet Artemis' searches were much more refined; she had moved beyond exploring general career options to reading scientific journals in her field and reading perspectives of people in the field. Kaitlin, on the other hand, said she searched for information related to work and careers, but her searches largely relied on Internet search engines, and the only ones she described were articles that were presented to her, rather than active attempts to search for information on her own.

Charlotte said she and her roommates had talked about the different stages college-aged individuals go through and acknowledge the importance of the track they are on. She stated,

> we all came to a general consensus…it's almost like a process of going to school. Like freshman year, you party a lot. Then sophomore year, you find out what activities you're

really into.. junior year, you're like "oh crap well now I'm getting older and I really have to realize what's going on"…Then, you actually sit down and think about these real things and it's like "okay, college isn't just about fun anymore…next year we are graduating, so what are we going to do to make that happen?"

Participants' own stages in work and career development influenced how and what they searched for online. Some were most interested in learning about work and careers at a general level (e.g., Kaitlin's description of reading articles on the search engines) and others actually searched for specific opportunities (e.g., internships, networking, or something that had to do with the discipline they were currently studying in college). Regardless of the different things they searched for, it is important to note that work/career related topics generated the most interest from participants; each of them could talk about something they were interested in learning about with regard to work and career-related opportunities.

Participants' preferences for work and career-related knowledge and opportunities were also dependent on their existing skills and assets related to confidence, knowledge, social support networks, and geographical location. For example, Cara was the one participant that was skeptical that she would use any kind of online program for anything. She believed it would be a waste of her time. She said she wanted to continue learning about opportunities to volunteer, so that she could gain experience and build her resume. Cara said she has used online resources in combination with individuals in her social network to find the opportunities, but that she could navigate on her own. Unlike other participants, Cara could describe the skills she possessed that she could use to volunteer, places that she wanted to volunteer, had knowledge of how to do Internet searches for such opportunities, and perhaps most importantly, could identify the people in her social network that directed her to these resources (e.g., her mother).

Other participants also described how members of their social support networks (mainly family members, high school teachers, or college professors) told them about work and career related opportunities. In fact, the participants that appeared to struggle the most with career-related decisions (e.g., dropping out of college, anxiety about going to college, or social-emotional or anxiety issues when in college), lacked resources (e.g., confidence or knowledge of what to expect and what they needed to be successful after college or the importance of education at large) and social support (e.g., support from parents who were also college graduates or supporters of education at large). Additionally, a few participants experienced

limitations related to geographical location (e.g., lack of knowledge of different types of career paths other than the positions that people they know are in); participants from rural areas (e.g., Julia, Kaitlin, London, & Hunter) discussed a limited range of career possibilities (i.e., roles related to health care and farming), whereas in general, participants from metropolitan areas had a wider range of social support networks that helped to expand their options beyond those two career fields.

Life and social skills.   Along with work and career related topics, life skills (i.e., financial management and prioritizing) and social skills (i.e., communication with bosses, coworkers, professors, and in personal relationship) derived as a main content category that all participants discussed as something they, or individuals their age, either want, or need to learn about. Most described life and social skills that influenced their lives on a daily basis; if they did not, they were included in their response to the general question of "what do you or people your age want or need to learn most about?" Many participants discussed being out on their own for the first time and struggling to manage checking accounts, bills, credit cards, or becoming established in this regard at large. For example, when asked about the topics that people her age would be interested in learning about, Artemis stated,

> Something I definitely think would be necessary would be something about financially structuring your life, so when you pass college, [you are able to] set yourself up so you can get loans from banks or have an okay credit score, or get the landlords to sign you a lease.

 For some participants, managing finances appeared to be challenging because they were doing it for the first time or in conjunction with other priorities. For example, Jason was a university sophomore, who recently transitioned from dorm life to apartment life, was paying his own bills for the first time, and his family lived in another state, which was 1000 miles away. He stated,

> Having to buy all your own stuff, like food, pay all your own bills and rent it's just…you have to keep up with it. Last year, I didn't have to pay my own rent and stuff, and it's a lot more overwhelming just to keep track of all these new things especially with homework, due dates, and stuff.

For Jason, the freedom and choices that came with moving out of the dorm also brought challenges and responsibilities that he had not experienced previously, and it was not financially structuring his life alone that was the biggest challenge, rather it was managing it along with

other priorities in his life. Jason also stated, "I think that people are mostly concerned with how well they do on tests, how they can survive the stresses of everyday life…living by yourself, and just being more independent than you have ever been." The stages of development and preferences for life skills related content appear to be related to both school or college and work, as well as living arrangements, particularly those that involve new roles (e.g., as a student) or responsibilities (e.g., being financially independent from parents). In other words, their roles and responsibilities in school, college, or work facilitated participants' interests in these topics.

Similar to Jason's descriptions of wanting to learn to manage multiple roles and responsibilities, other participants described their need for skills that helped them balance priorities. For example, Cara responded, "Probably time management and like study tips and things." Although many life skills were coded as participants described a need for them, others were categorized here when I, as the researcher, saw it as an area of need; in other words, based on their descriptions of their activities and management of them, I believed participants would benefit from content that helped them balance their priorities and responsibilities although they did not recognize the need. For example, Charlotte, who was enrolled full time at a university, worked 2 jobs, and was involved in a sorority talked about her busy schedule and how it did now allow her to play games or do other things people her age were involved in. Concurrently, she discussed Facebook a lot and said she was on there "constantly." When I asked her to explain because she had just said she did not participate in a lot of online activities that did not have to do with her work roles or other responsibilities, Charlotte stated,

> That's the one thing I do make time for…I probably check it like once every hour at least …probably more because I have it on my phone, and it sends me updates automatically if I ever get a notification, so I'm like constantly on it. It's pathetic; it really is.

Unlike Cara, who saw a need for learning about time management, Charlotte did not fully recognize the role that this online activity played in her own life balance, or lack thereof. Although Charlotte did not acknowledge that time management was an issue for her, she did recognize the influence of modern technology on social skills. Specifically, she discussed the role that technology played in communication issues for people her age. When I asked her to describe what would help, she stated,

> something to reiterate the fact that you actually do need to be able to effectively communicate with people, and it might make your life a little easier …I feel like in all

aspects, people that are the most successful in society, in general, have really good communication skills. Like President Obama, the reason he was elected (in my opinion) was because he was such a great speaker, and he can effectively communicate with everyone. If you want an interview or a job or something, [and] if you're so used to looking at a computer screen or you're like text messaging and you're in an intense job situation, you're not going to know how to handle yourself.

Charlotte, a communication major at a university, conveyed the importance of social skills while discussing the influence of technology. Although almost all participants described situations or provided examples of times when communication skills may have facilitated more positive interactions with others, not all participants recognized the need.

Alex, for example, appeared quick to recognize areas where others needed help, but unable to distinguish the ways in which his own communication skills influenced a negative encounter with a professor. When I asked him about social skills, he said "I think I'm pretty good at things like that," but he said that others his age "would benefit from lessons on respectful dialogue." Then, when he was asked to express a negative experience, Alex described a situation in which he was angry about a grade he received. He elaborated by stating,

> I blew up in class after getting a 95 instead of 98 because my teacher would not listen to reason for the last three points… I kind of just stormed out at the end of the period. Then, he contacted the Dean of Students, and she e-mailed me. I told her I did not want to talk to her in a very polite, shifty way, but then she insisted I talk to her. Then, I went to her office and was directly confrontational with her saying, 'I already apologized to the professor… it won't happen again. I respect his authority now; please do not keep me here.' She was like 'no, we are going to talk about it and we are going to get to any deeper issues that are going on.' I kept up a very confrontational and angry tone towards this authority figure and her interference in my personal affairs….I adopted the negative tone because I didn't feel like she was respecting me.

Alex could effectively speak about his negative tone, but he did not see his own social skills as the issue. Instead of seeing how they may view his negative tone as a lack of respect, he believed it was the professor and the dean, who were causing the problems because they did not respect him. Themes of social skills recognition (or lack thereof) were persistently coded across the data. Because not all participants recognized a need for their own social skill development and thus, did not have preferences for online program content regarding social skills, intervening conditions (as opposed to causal conditions), such as social support networks were more commonly coded with this content area.

Romantic relationships. Although not as common as work and career related interests or life and social skills, many participants (*n* = 23) were also interested in wanting to learn what others want or expect from them in romantic relationships or more generally, how to cope with daily experiences or interactions with romantic partners or potential partners. For example, Julia sated, "I think the main thing [for people my age] would be jobs because they're getting ready to go into the workforce, and then probably romantic relationship type of advice as well." Many participants' comments on the issue echoed Noel's, who said he wanted to know what girls were thinking. Reading signs or interpreting mixed signals was a common issue that many participants discussed when asked to describe the specific kinds of issues they had in relationships. Jason, who had never dated before said, "what you should do and what you shouldn't do…what's good for first dates and how to read signs." Jasmine, a more experienced dater said, "ways to move on or how to figure out mixed signals…maybe what a girl could say to herself to sort of reorganize her thoughts to move forward… not think about what other people, or what he wants to do." Many participants struggled with some of these issues, yet they were also quicker to reference examples of issues their friends had than they were to describe their own experiences. For example, Alma stated, "I know that I have a lot of friends that come to me for advice. Most of the time they're asking 'what should I do' because…teens play dumb mind games. I know people get confused."

Many participants also described their desire to learn how to date and communicate with romantic interests or partners. For example, Noel, an 18 year old male stated, "I guess I would like to see some information articles on like how to date a girl or where to go on a date…or what to talk about with girls." Charlotte described the role of modern technology in relationship communication with an explanation of a time when she was thrown off by the fact that a potential dating partner called her rather than texted her. She stated, "Well, the next day he called me just to talk…I looked at my phone, and I, legit, felt uncomfortable." Charlotte went on to say that she and others her age were so accustomed to communicating via written words (e.g., texts or instant messaging) that they often struggled to communicate verbally or face to face.

In the same conversation, Charlotte said that these issues with technology and dating at large were different from previous generations. For example, she described "dating" as an obsolete process in general and stated,

> I feel like a lot of people are like 'oh, I'm going to break up with him over text' or 'I'm going to text them this or that,' and then it gets misconstrued. This is especially with younger generations, growing up with texting and Facebook. I [also] feel like going on a date is unheard of on a college campus now. I went out to dinner with this guy I'm talking to, and it was like so bizarre. I haven't gone out to dinner and a movie in like literally three years since I've been here. It's always like, 'hey you want to meet up tonight' or 'let's go out'…I don't even know how to go on a date anymore.

Data revealed that 18, 19, and 20 year olds were all at different stages within their relationships, just as they were regarding work and careers. Some (e.g., Jason, TP) had never dated or been in a relationship, so they were interested in learning how to meet people, how to read signs during a relationship initiation stage, or what is considered attractive to a potential partner. TP said she wanted to learn "how you make yourself attractive, or what kind of things girls or boys like." Ben had been dating his romantic partner for over five months and said he was experiencing "communication roadblocks" that he attributed to sex or gender differences. Others, such as London and Artemis had been in relationships with the same partners for about two years; they were more interested in learning different things to do so they did not get "bored" or how to make long-distance relationships work.

Participants' interests and enthusiasm (or lack thereof) for finding information about romantic relationships online were related to their experiences with relationships. Artemis stated,

> I don't think I'm very interested in romantic relationships. I could see other people my age group being interested in it, but I am not at this point in my life. I think maybe it's because I am in a relationship and have been for a couple of years, so it's not something that's new to me or it's not something that I'm questioning….so I don't think I'd turn to an online website to seek any information or anything

.
Artemis was resistant to seek information or advice online about her own romantic relationships, and this may be because the information she had seen in the past was specific to new dating relationships (as with online dating) or insecurities in relationships (as commonly seen in online magazines), whereas she was comfortable in her long-term relationship.

Unlike Artemis, most female participants said they would be interested in an online program about relationships. This was not the case, however for males. Although almost all males could talk about some issues they had had with romantic relationships or dating, males (e.g., Edward, Jackson, Hunter, and Max) were more reluctant than females to seek advice from anyone, or search for information on this topic. For example, Hunter, who described his on and off relationship with a female, said he was not interested in relationship advice at all. Max, who was focused on his aviation career plans, said, "my life has been pretty busy for the most part…so I don't have a desire for any relationship,… and I haven't gone looking for information." Some of the male participants even acknowledged relationships as an issue that people their age need to learn about; at the same time, their responses indicated that it may be challenging to encourage their participation in an online program for romantic relationships. For example, when I asked him to describe some topics that he would be interested in learning about he said,

> Intimacy topics like safe sex and stuff…just how to practice healthy relationship skills if that makes sense…how to interact with someone on a daily basis in an intimate manner [, but…] I don't think I would go to an online resource to find information on that. I don't really like to take people's advice on things like this, like personal matters.

Although less commonly mentioned, relationship abuse was another issue discussed by a few participants ($n = 3$) as something they have seen others experience and something that might be useful. For example, Maria stated, "I think that recognizing abuse is one for sure like not even just physical abuse – mental abuse and passive aggressiveness is definitely something that people don't really notice anymore." Edward discussed his own experiences as he said that he was abused by his father and this influenced his personal relationships with peers and romantic relationships.

Some participants appeared to associate romantic relationship issues with information they read in online magazines, or they assumed I was trying to create an online dating program. For example, when asked how she had participated in an online program in the past, Julia stated,"I don't know, I mean magazine online programs, that sort of thing…I look at Cosmopolitan, Seventeen, and those are the two main ones… for advice on certain things, like relationship advice and that sort of thing." When I asked Kim to describe topics related to romantic relationships that she would be interested in learning about in an online program, she

said, "I'm not really sure…To me online dating is kind of creepy like I'd rather meet someone outside of the Internet." Although I was not referring to online dating or magazines, these participants' responses reflected their own associations and experiences with online resources.

World views. In general, world views (e.g., politics, religion, values) was not something participants brought up on their own as much as they did work/careers, life/social skills, or relationship issues. About half of the participants, however, were really interested in exploring their identity in the area of world views. Many participants talked about news articles, websites, or blogs they followed, so they could stay updated, and many discussed wanting to learn about others' views or wanting to debate about controversial issues (e.g., politics, religion, abortion). For example, Artemis stated,

> I like reading about religion. I like debating about religion and discussing it with my friends. I'm an atheist. In my circle group of friends, I've got a very devout Christian, my boyfriend is Jewish, and my sister is Agnostic. My mother is Hindu, and her husband is Muslim. So when we have all of these conversations, I'm open to everything obviously…I just like learning more about it. I've personally read a lot of the religious texts and so has everyone else about their personal religions, so we have very knowledgeable conversations. I just do it because I feel like I always learn more from people who actually practice the religion as opposed to just reading about it from an outside [source].

Older adolescents gave various reasons they wanted to learn about religion, politics, or values, but the most common reason for interests in world views was their interests in wanting to be or stay "in the know" or be able to have knowledgeable interactions with others. In this sense, they often referenced reading news items on a regular basis or utilizing search engines to search for answers to specific questions. For example, Alma stated, "the guy at the concert was wearing a shirt that said 'F'ed up by Wall Street.' So I went online today and was reading about it because I didn't know exactly what it was." Wanting to learn about others' views in general was another common response. For example, London said she liked to debate world view issues with her friends because it helped her to learn how others view the world. She stated,

> sometimes we talk about like President issues and stuff cause we hear a lot of things on the news…and like one of my friends is in current events, so like a lot of things get brought up like homosexuals, abortion, and all those topics…she'll bring them back to us and we'll get into those conversations. I like to get my opinion out, and…it's just good to hear what other people think because I sometimes forget…my opinion isn't the only one that other people have…and hearing what they think is kind of different and nice.

About half of the participants, however, did not enjoy debates about these issues, nor did they search for information about religion or politics online. In fact, individuals, such as Julia, were only interested in hearing about it if there were new laws that impacted something with which they were involved (e.g., work/school). Julia stated,

> I'm not very into politics. I mean I have my mind made up about certain things, but I don't think I would really categorize myself in politics, or have much use for an online type of thing about politics…just ones [laws] that would pertain to me, like farming.

Like Julia, some participants from rural areas did not relate to politics, but overall, participants' preferences regarding politics did not differ for participants from rural and metro areas. Age, however, appeared to influence participants' interests in learning about others' world views or about politics at large. For example, Charlotte stated,

> I could care less about politics when I was younger. But I feel like now that I'm old enough to vote…I don't want to make an uninformed vote, so in my little free time, I've been trying to [learn about] stuff like that.

Although many participants were interested in being informed about various world views, some responses also indicated that the information that is available on the Internet may be overwhelming to them. For example, Kim stated, "There's just so much. I don't know which one to do." Kimberly said she did not have time to read all the information that was out there and stated, "I won't go on a site and click on different things, but if it is suggested, I'll read it and look at the videos." In other words, Kim appeared to suffer from "information overload" and as a result, remained uninformed unless others brought it to her attention.

In summary, the categories for engaging content were work/careers, life/social skills, romantic relationships, and world views (e.g., politics, religion). Life and social skills, following work and career related topics, were coded in some capacity across all participants, whereas romantic relationships and world views (i.e., politics and religion) were coded categories for many participants, but not all. In fact, in some cases, they were only coded because participants referenced their lack of interest in searching for information about such issues. Although many participants recognized the need for program content that could help them in their future roles, others did not recognize the ways this type of content could help them, even when the need for such content was revealed in the interview data. Conditions that influenced participants' preferences for certain content or topics included: personal interests and hobbies, age, current

roles (e.g., high school or college student, employee, parent), skills, resources such as social networks, and living situations (e.g., geographic location and independence from parents). Additionally, participants were in different stages in work and careers (e.g., working at an entry level job and not in college or almost finished with college with some goals for following a specific track) or romantic relationships (e.g., never been in a relationship or dating someone for three or four years with future expectations of the relationship). These stages were independent of age and influenced preferences for those topics, as well as other topics (e.g., life and social skills and world views). Participant preferences for content, and the amount of content they preferred, were revealed throughout the interviews, and through the program review forms. Participants' preferences for the type and amount of content they preferred was related to their preferences for other program characteristics.

Engaging technological tools. I asked participants about the kinds of technology they used daily and why. From this, engaging technological tools emerged as a theme. The tools that I coded and describe here as categories of engaging technological tools are those that participants described using at least daily, if not more frequently (i.e., hourly or in between events throughout the day). Participants' preferences for technological tools included *social networking platforms*, *videos*, *music*, *mobile phones*, *and social media tools* (see Table 7).

Social networking platforms. Social networking was discussed by all participants, and all participants discussed the ways in which specific platforms (i.e., Facebook) was a part of their daily lives, or had been recently. Some participants (i.e., Kaitlin) updated their status a few times a day and indicated that they spend about two hours a day on Facebook. Others (i.e., Edward) averaged about four hours a day on Facebook. A few participants (i.e., Artemis, Ben) remained skeptical about spending so much time on Facebook, yet acknowledged that they used it regularly and recommended it as a way to reach individuals their age. Artemis said, "I don't have the time and energy to care about everyone's stuff that pops up...I use it mainly for purposes of communication like with people who I don't have their phone number [, and I post] updates with a lot of links to articles that I find interesting that no one reads." Ben stated, "I'm into it in a train wreck type of way. I guess it's one of those things that annoys you, but you are still fascinated with it." Only one participant (i.e., Cara) said that she (at the time of the

interview) had permanently deactivated her Facebook account in an effort to focus on school work instead of being constantly connected to friends and family via social networking.

Table 7

Engaging Technological Tools, Conceptual Categories, Definitions, and Examples

Conceptual Categories	Definitions	Examples
Engaging technological tools	The types of technology that participants engage with, at least, daily	
Social networking platforms	A website that participants described as a means of gathering information or connecting with others in their social networks on at least a daily basis	Gaining information or connecting with others through Facebook, Twitter, MySpace, Tumblr
Videos	A form of multimedia that participants described as an engaging way of gathering information from or sharing information with others	Watching videos for classes, on YouTube, video blogs, or other websites
Music	A form of multimedia that participants described as engaging and as a means of relating to others	Listening to music via iTunes, Pandora, and YouTube, or sharing music on social media platforms (i.e., Facebook)
Games	A game played on their computer that engaged participants with or without other people	Playing games such as WarCraft, Words with Friends or Angry Birds that are available through social media or their computers at large
Informational social media tools	Types of social medial tools that engaged participants with content on a particular topic or allowed them to receive answers to specific questions	Receiving information or facts by reading blogs, participating in forums, discussion boards, or question/answer sections of websites
Mobile phones	A device that participants described using regularly to communicate with others or gather information via the Internet	Texting or using Smart phones to connect with others or gather information through direct contact or via a social networking platform or website

Cara said, "I feel like social networking sites are just ways in which people can be nosey and waste time looking up what is going on in the lives of people they would not normally be talking to without the site." Charlotte described Facebook and its presence in the daily lives of people her age as

> a weird phenomenon…it's so engrained in our culture and the youth don't even think about it…like when I got to my computer, I don't even have to be on the Internet, I'll just be going on to Microsoft Word to write a paper; the first thing I do as soon as I turn on my laptop is go to the Internet and check Facebook. I have to consciously think, "Do not go on the Internet."

Comparing Facebook to an addiction or directly referencing being addicted to Facebook was also common. For example, Kimberly said, "During finals last year during both semesters, I deactivated my Facebook for three weeks before and the week of. That is something I told myself because I know my addiction, and I know I can't be doing that during finals."

Participants had mixed reviews about Twitter. Some participants mentioned using Twitter, but most said they either did not use it, or referenced it as a site they did not like at all. At the same time, many participants said if they were creating an online program, they would incorporate both Facebook and Twitter because many of their friends used Twitter regularly. MySpace was also mentioned, but only as a site participants used in the past, and no participants mentioned having a MySpace account at the time of interview. Two participants (i.e., Alma, Megan) said they used Tumblr, Alma said it "is kind of like a mixture between the two [Facebook and Twitter]. Basically, you can write stuff on there, but I mostly use it for pictures and to read posts."

Videos. Behind social networking, videos were the second most commonly coded technological tool preferred by youth. Many participants ($n = 25$) specifically recommended the use of videos when creating online programs for people their age. For example, Sue stated, "I think if it were more video type stuff, more people my age would pay more attention because I know a lot of people do not like to read through a bunch of information." Many participants referenced YouTube as a source of videos. For example, Charlotte stated, "Youtube videos are huge right now." Along with YouTube, participants often discussed video bloggers that they followed. For example, both Kaitlin and Charlotte, who come from different backgrounds and lead very different lives (e.g., Kaitlin is a mother and full time employee, whereas Charlotte is a full time university student and employee), mentioned following the video blogs of Jenna

Marbles, who posts random facts and tips via video. Participants also (i.e., Artemis, Jackson, Ben, Megan) mentioned watching videos via Ted Talks on their own or when referred by someone else. Although there are a variety of ways videos can be used, participants' responses indicated that videos were one of the most valuable technological tools as they engaged them and helped them to learn.

Music. Many participants ($n = 19$) also discussed their preferences for listening to music online or engaging with music in programming. Many participants said that sites with music were among their favorites and something in which they participated daily. Many listened to music via YouTube. For example, Kimberly said, "I listen to a lot of news stories on YouTube and music videos and stuff like that." Most often, music was mentioned as something participants listen to via the Internet as they are doing other things online. For example, Maggie said "I use iTunes or Pandora and I'll be on Facebook or talking to someone online." Some participants were more experienced with technology and used some type of music programming. For example, Max said he had used music for game programming and stated, "We would make our own music for our games, and this [Audacity] is the program we would record the music with." Participants' preferences for the types of music differ, and culture and ethnicity had some influence. For example, Noel was from China and used the Internet to find music to which he could relate, which included Chinese, English, Japanese, or Korean music.

Games. Along with videos and music, games were another form of multimedia that many participants ($n = 16$) referenced using. Hunter stated, "videos and games are the most interesting things for people my age." Many males (i.e., Jason) preferred "action, adventure, and sports" games. For example, when asked why he liked the games he played online, Edward stated, "It's kind of like a mystery where you try to survive…like this dude is drowning and you have to try to get him out. I don't really know why I like it, but you have to get him out." A few male participants mentioned a preference for games that involved role playing. For example, Sentri stated, "role-playing games…any game that has a story line. You play a certain character in the story…like WarCraft." Almost all females said they either did not play games at all online although many said they did when they were younger (e.g., Cara), or they said they do not, but then mentioned games they played through social networking sites. For example, Charlotte said she did not have time to play games online, yet later said she was really into

Farmville (a game she accessed through Facebook) for awhile until she found herself thinking "Oh my gosh, I have to go home and harvest my strawberries" and later thought, "this is stupid." Other than this, the one female (i.e., Kaitlin) that reported playing games online played Words with Friends and Angry Birds.

Informational social media tools. Participants ($n = 13$) also discussed following or reading blogs, participating in forums, discussion boards, or question/answer sections of websites as places they go for information or facts. Although most of the blogs participants referenced were video blogs, some participants followed blogs that were primarily text-based because of the type of content that was posted. For example, Ben said "I do visit a few blogs frequently that have random updates about news or certain things." Artemis said she followed a couple of social/personal blogs, such as those about fashion or travel. Artemis stated, "With the blogs…it's really nice to get to know someone and their views on the world without actually having to sit down and talk about it." Although not all participants discussed blogs specifically as a means to gather information, all participants used blogs, discussion boards, forums or question and answer components of websites to gain knowledge generally or to receive answers to specific questions and many listed blogs as their favorite websites.

Some participants talked about forums they preferred and in which they participated regularly. For example, Alex said he mainly uses the Internet to organize information for a band of which he is a member, or to discuss issues on a forum, such as 4chan, which is an image board that generates discussion through pictures and threads on random topics such as cooking, news, or aliens and ghosts. Many other participants said they regularly sought answers to specific questions via Internet searches. For example, Edward said, "sometimes I go to Ask.com and ask questions." Like Edward, most other participants frequently used Ask.com specifically and others just used the Google search engine to receive answers, including Cara, who had indicated that she was skeptical about participating in online activities at large unless it had to do with work or school. Many participants used these features to complete their homework. For example, Julia said "If there's a particular question that stumps me on a worksheet, I'll go to Ask.com and try to re-word or try to find some more information on it."

Mobile phones. Although many participants discussed their use of mobile phones for communicating with others (e.g., through texts), less than half ($n = 9$) discussed the use of their

phones to gather some kind of information from the Internet. Almost all participants discussed how much they used their mobile phones, specifically as their preferred mode of communication with others (which most commonly involved sending and receiving regular text messages); this was true regardless of the type of phone they owned. Kaitlin, for example, had a smart phone and said she keeps her phone on her all the time and related her phone use to an addiction, just as many participants described Facebook. Kaitlin said, "I check it and I'm like, no they didn't text me, but I'm gonna check it anyway. … It's like smoking…the hand and mouth motion, but mine is using my fingers." Kaitlin pointed out, however, that "not everyone can afford a smart phone." Hunter said he used the text messaging feature frequently because he did not have a smart phone and "it's a free and easy way to communicate." Therefore, many participants simply used their mobile devices for texting friends, or to receive facts via texts when they did not have a smart phone.

Only a handful of participants talked about using features of smart phones, but those that did so reported the use of the Facebook application as their most common activity. For example, when I asked her how much time she spent on Facebook, Charlotte said, "Oh God…I don't even know. I probably check it like once every hour or probably more because I have it on my phone and it sends me updates automatically, so I am constantly on it." Similarly, Kimberly said, "I'm constantly pressing refresh or on my phone checking [Facebook]." None of the participants discussed mobile applications that they used regularly other than Facebook or games (e.g., Kaitlin who played Angry Birds). Of the participants that had smart phones, most just described accessing the Internet generally (e.g., to find answers to specific questions). For example, Jasmine said,

> I have a smart phone. I have a Blackberry Torch…I love it. The Internet works really well. I don't really have too many applications because they applications won't go on the SIM card. They just stay on the phone, which will slow down the phone, so I have like what's on there…the few games that it already came with or the programs like the camera or video recorder and email.

Jasmine said that if she wanted to do anything else online, she just used a desktop or a laptop computer.

Some participants described using text-based services to receive information or random facts. For example, Rachel described a program she used to text questions and receive answers. She said, "you can text to it and you can text any question you want…like 'what is the weather

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today?'…they ask for your zip code." Rebecca said she and her friends texted random questions and received answers to them via this program. Kaitlin, who indicated that she had a smart phone and used it to access the Internet regularly, also used the text message feature to receive random facts via text messages. She said she signed up to receive the texts and "it would tell you the average lifespan of the fly or something…something that nobody would ever think about, but it would just randomly get sent to my phone." Kaitlin and others, who received random facts via text messaging, or through the Internet, appeared to appreciate this aspect of being digitally connected because the information they received gave them an opportunity to generate conversation with or between friends and coworkers.

In addition to the ways that culture/ethnicity, sex, and financial resources influenced participants' perceptions of engaging technological tools, their technological skill set the types of technological tools they were interested in. For example, George, who was more experienced with technology, described programming and the ways in which he regularly used the Internet to download movies or music illegally and used terminology that indicated he was experienced with these processes. He stated,

> Bit torrent is a process where it's a peer to peer file sharing system, where you download a movie from other people that have that movie. You download pieces like, one piece from this guy, one piece from this guy, one piece from this guy, and it compiles on your computer.

Hunter, on the other hand, said that he considered himself to be technologically savvy, yet when I asked him to elaborate he said, "I can do about anything on a computer, and I know how to use a Smart phone, I just don't have one…I can do just about anything on Microsoft Word or Office," indicating he was proficient with computers, yet he did not have the technical skill set or experience with the Internet as George did.

Engaging delivery styles. Engaging delivery styles emerged as a theme when participants described why they preferred certain technological tools or when their attention was interlocked with online content or activities. Participants discussed their desire for content or tools that were *entertaining*, allowed for *interaction/feedback*, was delivered or written by those with *experience or expertise* in a given area, matched the *voice/tone* of the *speaker*, *authentic*, and *developmentally relevant*. Moreover, a delivery style that included a *variety* of content or

engaging technological tools was important to participants, as was frequent and consistent content *updates* (see Table 8 for summary).

  Entertaining. All participants discussed their preferences for being entertained, and this was the most commonly coded category of engaging delivery style. I defined entertainment as an event, happening, or activity that participants found amusing or humorous in the context of boredom, leisure, hobbies, relationships, or educational activities. Entertainment was something that participants commonly mentioned when discussing reasons for their exposure, ongoing participation, or disengagement with a website, blog, or other online activity. For example, Ben stated that he frequently visited a website (http://www.cracked.com) because "the articles contained in it are not only informative (sharing interesting facts about history, psychology, politics, and world events) but also incredibly funny…the humor of the site keeps drawing me in." TP actually described "entertainment…movies, music, and stuff" as an issue that most people her age were concerned with. TP and others also said they used social networking sites (e.g., Facebook) for entertainment purposes. When I asked Kaitlin why she used Facebook daily, she said "I think it's funny." Just as individuals described activities or sites that engaged them because they were amusing or funny, individuals also described being disengaged by content or speakers that were not entertaining. For example, Rachel said, "I am not going to listen to a 30 minute talk if it is not exciting and entertaining to me." When I asked her what makes something entertaining, Rachel said, "like one speaker was telling a story…instead of just telling it, he would act it out; he would be [acting like] one person and jump over to the other person. It wouldn't be a big thing, but you'd get the message more in your head." Entertainment was associated with humor for all participants, yet what they found humorous varied across participants. For example, "call-out" cards were a component of the *That's Not Cool* online program. The call-out cards appeared to be designed with a humorous and sarcastic tone, yet featured messages that participants could read and have a concrete example of how they could respond when particular unhealthy issues arose in their relationships. For example, for the topic of "picture pressure," one call-out card read, "your boyfriend is so cute when he's badgering you for dirty photos," yet the picture of the dog on the call-out card implied that this statement was sarcastic. Some found the call-out cards to be "dumb" (Alma) or "cheesy" (Ben).

Table 8

Engaging Delivery Styles, Conceptual Categories, Definitions, and Examples

Conceptual Categories	Definitions	Examples
Engaging Delivery Styles	Participants descriptions of why they engaged with certain technological tools or when their attention was interlocked with online content or activities	
Entertaining	An event, happening, or activity that participants found amusing or humorous in the context of boredom, leisure, hobbies, relationships, or educational activities	An engaging speaker, online article or activities that were funny or exciting
Interaction/ feedback	A function of a social networking platform, tool, or website at large that engaged participants because they could communicate with others or give/receive advice or comments from others if they desired	Commenting on others' Facebook posts, blogs, or forums; receiving advice from others, answers to questions or solidarity from others via Facebook, Ask.com, or blogs.
Expertise/ experience	A characteristic of an online speaker, facilitator, or author that facilitated participants perceptions of credibility and engagement or disengagement with a site, platform or social media tool	Instructional expertise because of age or experience or a degree that provides the credibility for their knowledge of a given topic (e.g., professors for work/careers or people their own age for romantic relationships)
Voice/tone	Voice range or pitch, attitude, or energy/level of enthusiasm for a given topic that engaged participants with a tool or content	Professional versus informal tone for different topics, enthusiastic versus monotone and boring
Developmental relevance	Participants engagement because they were able to relate to material written for their age group or maturity level	Content that pertained to their age group or activities that were geared toward their maturity level; a voice that did not talk at or preach to them
Authenticity	Engaging content because the tools or elements of delivery style were real	Real people as opposed to actors; scenarios or stories that actually happened

Table 8 (continued).

Conceptual Categories	Definitions	Examples
Variety	Participants descriptions of being engaged by multimedia or a range of content on one website, social networking platform, or social media tool	A variety of perspectives on one topic; a combination of audio, visual, or technological tools (e.g., video, pictures, articles, and music).
Updates	Participants descriptions of high levels of engagement and ongoing participation when content on websites, social networking platforms, or social media tools were updated regularly	Frequent and consistent updates on Facebook that maintains their interests and facilitates their ongoing participation; adding new content that gives them a reason to go back and receive new information

Although participants, such as Alma and Ben liked sarcasm, they were critical and said they preferred the type of sarcasm or "creativity" as seen in television shows such as "The Daily Show" or "The Office." Those who found the call-out cards "funny" were less critical of delivery styles at large or placed more emphasis on developmental relevance or other engaging delivery styles than entertainment. Although participants' sense of humor varied, one similarity was that all participants found jokes regarding others' mistakes or humor at others' expense funny, whether this meant someone poking fun of politicians, individuals' attire or fashion trends, or passive-aggressive remarks about someone on Facebook

Interaction/feedback. All participants also preferred technological tools that allowed them to interact with others, largely because they wanted to give and receive feedback regarding the content. Participants described interactive elements as important because it allowed them to use their own voice to provide feedback (e.g., comments or advice to others) or receive feedback (e.g., advice from others, answers to questions, or solidarity from others). For example, Ben said,

> I know that some people just crave attention in a way. They post a funny status or something and they'll just cross their fingers and wait to see how many people like it. I know people who have been in the same room as them, and they will say, 'Oh I posted a status about this'. And I'll say 'Oh I saw that'. And they'll say, 'why didn't you like it?'... some people just demand if they post something funny, that 20 people will like it and they will be so happy and it will just make their day. Or if something bad happens

like 'oh I got a c on a test', frowny face…they want everybody who knows them to be like 'Oh my God…I'm so sorry…what happened?'

On providing feedback to others, Alex stated, "Giving users the chance to provide feedback is…vital. Whether it was responses on Facebook or Twitter or a forum on the main site, these features allowed the users to become engaged with the site, and gave them reasons to keep coming back. Whether giving or receiving feedback, this type of interaction was important to participants. When I asked Ben why he thought people needed this interaction or feedback from others, he said,

> Being able to get answers to difficult questions and experience solidarity with other people on there makes teenagers feel safe and secure, and being able to do this on a website makes the Internet seem a bit less hostile overall.

Charlotte had a similar response to why she needed feedback from others. She said it was because "they'll be like 'wow, that really sucks,' or like 'my week is like that too' [, and] you kind of like have something in common." In addition to eliciting reactions to their own comments, individuals appeared to like online activities or discussions, such as social networking, because they could observe individual reactions to others' comments or posts and validate or discount their own concerns, frustrations, or issues at large.

Preference for types and level of interactivity varied according to individual development and personal resources (e.g., confidence, friends, and social support). For example, if they felt isolated or disconnected with others their age, they preferred playing games alone or interacting with strangers (i.e., Alex, Sentri). Although a delivery style that allowed for interaction and feedback was important, some participants preferred to just read or watch others online. For example, Artemis said, "It's also nice with the blogs you can get to know someone and their views on the world without actually having to sit down and talk about it. I just read…a silent follower." Thus, although they prefer the choice, some participants simply wanted to observe and learn from others without having to contribute. For some, this was because they felt intimidated if they were expected to post their own information online, especially information involving debates or controversial issues; they attributed this to their past interactions with others and experience speaking in front of others in this way (i.e., Alma). For example, Alma stated,

> I'm intimidated by people, so I don't want to deal with them thinking less of me. [Interacting online] is easier because you don't have to think of the person looking at you,

judging you because they don't know who you are. But I think if I had to talk to too many people, especially about personal opinions, I'd just start getting hives.

Additionally, how they participated depended on who was in their social support system and how they were held accountable by them (i.e., parents, family, or members of their family's networks). For example, a few participants who were friends with their parents or other family members on Facebook were hesitant to post anything too personal because they did not want everyone across their groups to see it (e.g., Ben, London). For example, Ben was the youngest child in a big family, and he said his parents were older and more "old fashioned" and would not understand and he did not want to have to explain anything to them. Similarly, London was from a small town in a rural area and still lived with her parents; she came from a family who was connected and aside from her family on Facebook, she was friends with others who would talk to her family about her and in this sense, she likely felt accountable to an entire community in addition to her family. It appeared that those that had higher degrees of accountability from those in their social support system or had members of their system participating online (e.g., friends with family on Facebook), were more likely to discriminate what they posted, where they posted, or how often they posted. For example, Noel and TP participated in American Facebook and the "Chinese version of Facebook," and because they had more family networks on the Chinese version, they were more skeptical of posting on there than they were on the American version, which was largely made up of their groups of friends. Other than tastes in music (e.g., downloading music from other countries) or language barriers (e.g., with writing and how that could influence job preparation), this was the only culture or ethnic difference noted among participants.

Expertise and experience. The present analysis revealed that online web developers, facilitators, or authors need to have some kind of expertise and experience in order for participants to consider the technological tool or content relevant or credible. For participants, expertise included instructional or personal experience that comes with age, knowledge of a given topic, or degree that gives one the credibility to speak about a certain issue as discussed by participants. For example, when describing his preferences for a forum or a discussion board on religion, Alex said, "I would rather have a professor or a minister in a comparative religion

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providing the facts then have comments to the side or something…a professor offers the main opinion, then everyone else is able to weigh in.”

Like Alex, all participants said in some way that the “qualifications of the writers and contributors of websites are major factors in how reliable the information can be trusted to be” (Artemis). Artemis explained, “if the website is from a university or for educational purposes, I would prefer professors and graduate students as editors and contributors as opposed to just undergrad students.”

Other participants, however, believed that individuals their own age had the most expertise. For example, Alma stated, “Make sure the information is also given out by other people my age. If the person giving information or advice is a lot older, people my age will probably think they cannot understand what is going on because the world has changed since they were our age.” Some of the discrepancies between participants’ preferences for who they learn from or their beliefs about who had more experience depended on the topic. For example, Kim said,

> if it was [a site] for dating, I would want someone who has more knowledge. I know relationships in college can be more physical, and I know not everyone, like my parents would understand that. They would think ‘no this is the wrong way to do it. You need to first only talk, and then go on a date.’ I think the college dating scene is very different, so someone who understands the now and can give good advice. With work and careers, I would want both someone who has had experience and someone in the process of doing it, so they can tell you where they went wrong and how they got through it. For romantic relationships, I would just say whoever has the most experience, but for work and careers, generally when you’re older you have more experience with that, so age would matter.

Although most participants focused on the importance on the role of age in expertise, Artemis, believed that a participants’ age coupled with the facilitator’s sex and or experience, added value to the program. She said,

> I think I would almost always expect that [a facilitator…] would be female because I associate females with being more patient, so when you are looking at somebody to give you instructions or clear something up…so I’d just expect them to be female and middle-aged like my mom….because when they are too young, they are just like me…I don’t know what I’m talking about. What’s to say they know more than me?...I just think the way they can speak about it like if they were talking about a website…and if they use the proper terminology for it like if you are talking about cutting the sides off a picture and you call it ‘cropping’, you know what the word is, which means you’ve obviously done it more than once.

Others were more skeptical, however, and preferred information from scholarly sources. For example, Cara said, "I usually judge the reliability of a website or online program by the database I got it from, whether or not it is considered scholarly, and whether or not it cites where the information is taken from and what the credentials are of the person who is actually writing the information on the site." Regardless of the differences between participants' views on what made a program credible or gave it authority, it was clear from participants' descriptions that experience and expertise had a critical influence on the levels at which they engaged with technological tools or content.

Voice/tone. I defined tone as a voice range or pitch, attitude, energy or level of enthusiasm for the topic. The tone used in technological tools influenced many participants' ($n =$ 23) levels of engagement with a topic or the tool itself. For example, Charlotte stated,

> If a speaker is really engaging with the audience and they're like 'oh wow, he's really good,' then they're going to listen more, but if he's just like droning on and on and just like, 'oh whatever…I don't want to be here,' then they're not going to listen. Energy is huge…presenters actually have to kind of be like that because if they get your attention right away and then they get your attention and keep it.

Although almost all participants that discussed the importance of tone preferred a mixture of professional and informal tone, many, like Charlotte, were critical because they could reflect on their experiences with speakers or sites that were engaging or disengaging. Maggie said, "I would definitely prefer an informal tone just because I think it is more interesting. I have an online lecture that's a formal tone and it's monotone and boring. I would rather have something interesting or maybe make some jokes." Maggie's comment also linked tone to entertainment by her reference to humor through jokes. Alex on eloquence as an important teaching strategy said one of the most important things is, "Speaking well…speaking with the correct level, and speaking in a way that is not too high or too low." Alma stated,

> I feel like ideally, it could be like talk with a professional tone, but still calm them with a motherly tone type because then I would feel like if it's really informal, I would be less prone to take them seriously. If you have someone speaking professionally, then I think you'd be more prone to take their advice seriously….as long as they have a professional, but gentle tone.

Developmental relevance. Many participants ($n = 23$) described the developmental relevance, or being able to relate to material written for their age group or maturity level, as another delivery style that engaged them. Kim, for example, said "I just want to hear from someone who can relate to me." Participants needed to be able to "relate" to the content. For example, Julia said she reads an online magazine regularly because they have articles on relationships or other special topics (e.g., spring break), and she can "relate to those certain topics." Participants said they needed to feel that the content was written for them. For example, when Maria reviewed Real Teen Relationships, one of the things she did not like about it was the fact that it seemed geared towards a younger audience as evidenced with the title. She stated,

> I would make the title inclusive for different age groups. The Real Teen Relationships title is only relevant to teens and does not attract college students to the website [, which] keeps students looking for other websites that they believe relate to them.

Like Maria, age was something participants referenced; specifically, they did not believe adults could relate to them on certain topics and believed that people their age would be more receptive to advice if adults "are still relatable in terms of age…are not talking down to you…and acting like they know everything and being like, 'this is how it is' and talking to you like you are young" (Charlotte). The analysis revealed that participants needed to believe that the content pertained to them and that the authors, developers or instructors could relate to them. When they believed the content or activities were developmentally relevant, they experienced higher levels of engagement.

Authenticity. Many participants ($n = 20$) said they could relate most to material that was authentic, or "real," which often meant real stories told by real people as opposed to actors or someone who could not have experienced something. For example, Jasmine stated, "Because I think hearing other peoples' stories that I can relate to are more interesting to me." Charlotte said she was more willing to pay attention when people "tell real life stories that go along with what they are talking about." Many participants believed that they would trust a source because of the professional tone or expertise and experience of the speaker, yet they would be more engaged by the program that included voices of people their own age, or that did not sound like adults "preaching" the same content at them that they have heard for years. Alex elaborated on the difference between trusting a program and being able to engage with program content that seemed real by saying, "I'd prefer an informal tone from peers for authenticity sake [so the

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material] did not come across as fake and pandering and after-school special-ish." Like Alex, others believed they would trust a source because of the professional tone or expertise and experience of the speaker, yet they would be more engaged by a program that included voices of people their own age. When Hunter discussed this, and I asked him if he would trust a program or website if it were created or ran by people his own age, he said, "I wouldn't trust it as much as a professor, but it would be a little easier to listen to, and I'd be able to pay attention."

Variety. Although participants appreciated many different technological tools, they especially appreciated "having a variety" (Maria) of them. Many participants made comments similar to Cara, who said, "I think it is good to include a variety of resources when creating a website or a program so it appeals to a wide range of people who view it." This includes content variety, as well as a variety of multimedia. Many participants said they preferred to learn from a "combination" of audio, visual (e.g., pictures), or technological tools at large (e.g., George, Jackson, & Kimberly). Other participants described their preferences for content variety. For example, Artemis explained how a teacher from high school utilized Ted Talks in one of her lectures and that she continues to go back to the site years later because of the variety of content. Alma made a similar comment when she responded to why she appreciated a particular blog and stated, "there are a wide variety of stories in the blog that cover many of life's decisions from love advice to school advice." Julia stated, "show multiple sides and aspects to many topics." Additionally, many participants noted that they preferred advice from a variety of people. It is important to note, however, that too much variety could foster confusion among youth. For example, when Maggie was describing a website she did not like, her reason for the negative feeling was "because there are too many options and it confuses me…I need a website that is more simple."

Updates. Content updates, or frequent and consistent website activity that involved new facts or information, also promoted high levels of engagement among all participants. "Keep it updated" (Marilyn) or "It would have to be addictive, like Facebook…it's always being updated, always something new" (Kim). Many participants' comments for what engaged them or facilitated their continued use of a website or online activity echoed Marilyn and Kim's. Additionally, many participants discussed their experiences with online content that was not updated and cited this as a reason for not going back. Because the Internet offers, so many

choices and options to choose from content updates were critical to whether or not they would

return. For example, Alex said,

> In terms of bringing repeat traffic, a constant update schedule is really important. I mean you have to be adding new content all of the time. I've checked out a couple of blogs that I think, 'oh this is really cool…I'm going to subscribe to this blog," and then there is no update for 2 weeks, and then I think this person is obviously not paying attention, so I'm not going to come back to this site… If I am interested in the topic, and they are not posting anything new, period, there are other sources that I will resume my search for.

Along with humor, the website that Ben visited regularly kept him engaged because

"This website is frequently updated, with articles being added almost every day." When I asked

Marilyn why she kept going back to some of the websites she did and what she would

recommend to me if I started an online program, she replied, "Keep it updated." The one

exception to all participants wanting updates was when some participants discussed Twitter.

Only a few participants reported having a Twitter account and found the updates useful, which is

a small number compared to Facebook, which shares a similar amount of updates, yet engaged

participants for other reasons as well (e.g., popularity among their friends). Maria said that she

does not have Twitter "because I don't want to get the constant updates." She said she was

already involved in Facebook and received enough updates. Twitter was an exception for some

participants because the updates are extreme, too frequent, or meaningless. For example, Ben

stated,

> People will update their status or Twitter feed with meaningless things like 'Oh my God…I just saw someone fall off their bike' or 'I can't believe I haven't talked to this person in 3 days'. And that's really not that important.

Thus, these results indicate that although updates are important, they should be

meaningful.

In summary, with regard to the online program characteristics that most interest youth,

themes regarding engaging content, technological tools, and delivery style emerged from the

data. Although there may be a need to address various problem behaviors among youth,

participants expressed their interests in learning about positive youth development content (i.e.,

work/careers, life/social skills romantic relationships, world views) rather than problem

behaviors (e.g., drug/alcohol prevention, sexual risk-taking). Moreover, participants' individual

characteristics (e.g., age, sex, ethnicity, technological skill set, social support network)

influenced their preferences for program characteristics. Their experiences with *online programs* also influenced the ways in which they described their preferences, or their responses to interview questions. With the exception of one subject (Alex), none of the participants had participated in an "online program" by my definition. Alex had been required to take a non-credit alcohol prevention course at his college. Alex's definition of an "online program" reflected his experiences with the program. When I asked him to define "online program," he stated,

> I guess the first thing that comes to mind is a safety program or an alcohol education program. Something that is a selection of slides with content and then at the end usually, quizzes to show you actually learned the material. Occasionally, there will be audio integrated, but mostly just text and ending in an assessment.

No other participants had participated in an online program to their knowledge. More commonly, responses to "what is an online program?" involved examples, such as "Google" or "Facebook." For example, Max said, "pretty much just anything that you use the Internet for [is an online program]. Google's an online program…a website's an online program." Sue said, "I would probably think of Facebook, MySpace… those types of things." When describing their preferences, participants (aside from Alex, who included online programs) referenced online classes, websites, or online activities in which they have participated, or chose not to. Thus, participants' preferences and recommendations reflected their own experiences with exposure to websites or online activities and the terminology employed by the program developer or administrators. As such, I build on their preferences for program characteristics to address research question 2, which delineates participants' descriptions of why and when program components are critical to youths' exposure and participation with a website or online program.

Research Question 2: How Do Older Adolescents' Preferences for Online Program Characteristics Influence their Exposure to and Participation in Online Programs?
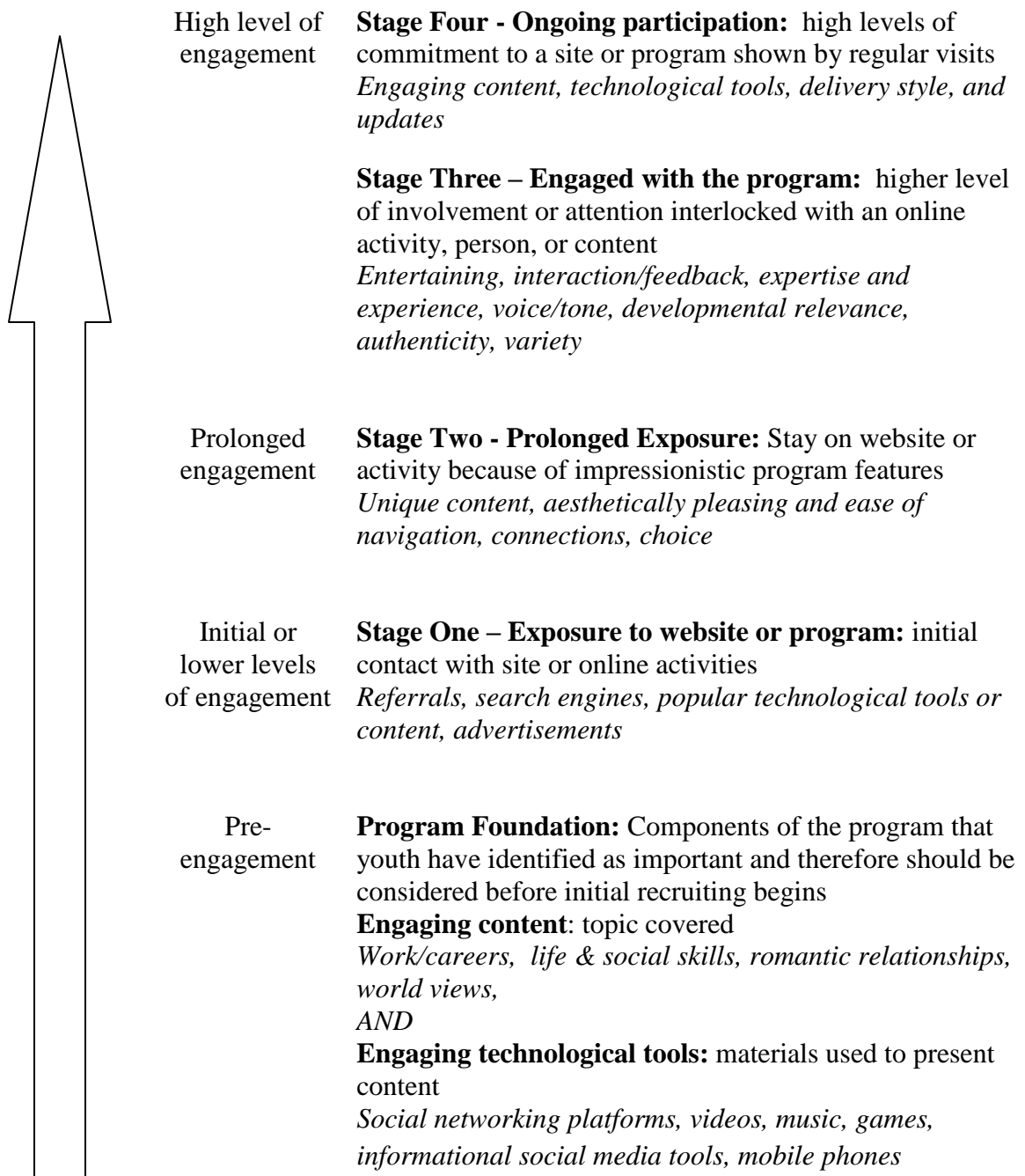
Four stages of engaging youth in online programs. The analysis of the findings as they applied to this research question resulted in a four-stage model of developing online programs that engage youth, including the program foundation. The content and technological tools that engage youth provide the foundation of the program. Moreover, the delivery style and functions used by technological tools influenced participants' exposure to and participation in online programs. Thus, once the purpose of the online program is established, it is important to consider

how the content and tools can be translated in a manner that will increase youth exposure, prolonged exposure, and ongoing participation with the program. Each of these stages and essential program elements for each stage are outlined in Figure 3. It is important to note that program features discussed in each stage continued to influence the participants' levels of engagement in subsequent stages. In other words, they are described in the order at which they began to influence participants' engagement, but their role in engaging participants was continuous.

   Pre-engagement: Program foundation established. The present research revealed that the content and technological tools that engage youth provides the foundation of a program. Youth were most interested in and searched for information online regarding work/careers, life/social skills, romantic relationships, and world views (e.g., religion, politics). Social networking platforms, videos, music, games, and informational social media tools (i.e., blogs, forums, discussion boards, and question and answer sections) were all discussed by many youth as the types of technological tools or online activities they prefer. Together, the content and the technological tools provide a basis for program exposure; this is where youth are exposed or become engaged with the program. This is partly because with the Internet, comes choices; the present findings revealed that providing youth with content that meets their needs is important, yet if tools are not in place to get them there or to engage them when they initially come to the program, they can easily resume their searches for other online content. Thus, content and technological tools that engage youth should be considered the foundation of a program because the technological infrastructure that supports each of them is essentially the starting point for developing plans for program exposure and ongoing participation.

Figure 3

Stages of Engaging Youth in an Online Program

High level of engagement

Stage Four - Ongoing participation: high levels of commitment to a site or program shown by regular visits
Engaging content, technological tools, delivery style, and updates

Stage Three – Engaged with the program: higher level of involvement or attention interlocked with an online activity, person, or content
Entertaining, interaction/feedback, expertise and experience, voice/tone, developmental relevance, authenticity, variety

Prolonged engagement

Stage Two - Prolonged Exposure: Stay on website or activity because of impressionistic program features
Unique content, aesthetically pleasing and ease of navigation, connections, choice

Initial or lower levels of engagement

Stage One – Exposure to website or program: initial contact with site or online activities
Referrals, search engines, popular technological tools or content, advertisements

Pre-engagement

Program Foundation: Components of the program that youth have identified as important and therefore should be considered before initial recruiting begins
Engaging content: topic covered
Work/careers, life & social skills, romantic relationships, world views,
AND
Engaging technological tools: materials used to present content
Social networking platforms, videos, music, games, informational social media tools, mobile phones

Stage one: Initial or lower levels of engagement through exposure. At Stage one, online program exposure represents youths' initial contact with the site. The focus of this research was to gather data to inform online programming that was not mandated. The present analysis revealed that online program exposure can come from *referrals, search engines, popular technological tools,* or *advertisements* (see Table 9).

Referrals. The most common recommendations that participants gave for recruiting participants to an online program centered on referrals. Teachers, friends, peers, or family members were all considered important sources of referrals for online websites or programming and were recommended by all youth for recruitment efforts. For example, Julia said,

> instructors could give [students] a piece of paper or something kind of explaining what the website is…instructors know what they're talking about, and if I trust them to teach me something that I'm going to use later on in life, then I would trust them to lead me to certain [online] tools that could be helpful.

Noel trusted his friends as reliable referral sources because as he said, "usually my friends won't refer websites unless the website is very very useful." At the same time, the referral sources participants trusted depended on the topic. As Jasmine stated, "it sort of depends on the topic. If it was about a romantic program and a professor saying, 'oh everybody be sure to check this out,' and it's a website about romantic relationships, I would think that was strange."

Although sometimes friends or teachers told them about the website in person, referrals via social networking or other sources (e.g., discussion forums) were more commonly noted by participants. For example, Alex stated,

> having people post stuff about it on Facebook or Twitter or various forms..people will recommend links to stuff on forums […and] that's where I find most of my stuff…Buying advertising space is probably a waste of time, but having people spread the word in person to person interactions is most effective.

Alex elaborated by saying that people on forums were interested in the same topics and thus could help recruit or informally advertise a particular content area that youth were already interested in. At the same time, he recommended social media for "attracting" people to new, or a range of, topics.

Table 9

Exposure, Conceptual Categories, Definitions, and Examples

Conceptual Categories	Definitions	Examples
Exposure	Participants' descriptions of how they came into contact with a website or online activity and thus, were initially engaged with the online source	
Referrals	Participants' descriptions of being exposed to a website, blog, or online activity through referrals from other people that they trust to be knowledgeable on a certain topic	Viewing or getting to a website, blog, or online activities because they were referred to the site by professors (i.e., for work/careers) or friends or peers (i.e., for information on romantic relationships)
Search engines	Participants' descriptions of utilizing search engines to find a website or other online resource that could help answer a specific question	Typing a question or subject and tool they want to use into Google
Popular technological tools	Participants' descriptions of finding information or using an online platform, tool, or resource because it was accepted, viewed, or utilized by numbers of people	Finding Facebook and being more likely to use it over the MySpace platform because it was popular; Viewing an online video via YouTube because it went viral or was considered a "favorite;" choosing articles to read, videos to watch, or online websites because they are more popular or have higher ratings
Advertisements	Participants' descriptions of how advertisements could or should not be used to recruit people their age to an online website or activity	Advertisements on social networking platforms or in forums that pertained to the target populations' hobbies, interests, or roles and were not pop-ups were viewed more favorably by participants; many believed that advertisements like these may entice youth to move from the page they were on to that of the advertisement

Search engines. In addition to referrals, search engines were also mentioned by most (*n* = 26) participants as rationale for why they go to the sites they do. Participants were commonly exposed to online programs or activities because they typed a question into a search engine (i.e., Google), which led them to the site. For example, Rachel said, "last night, I couldn't sleep so I was looking for bible verses and relationship advice." Megan said, "I sometimes Google things to see if there's any answers." London stated, "Me…and my friends …if there's anything we question in the middle of the day, the first thing we say is 'let's Google it' or something like that."

Often participants discussed how they use Google to answer questions that pertain to their school work or college courses. For example, Jackson said, "I usually just Google the subject I'm studying and maybe like videos and pdf's or something…just search through and see what's online." A few participants said they even preferred to "Google information" about their homework because it was "so much easier" (Marilyn) than searching through their class text.

Some participants said they did not trust every website to provide accurate responses to their questions, so they tried to find sources that were reliable such as "other colleges' websites…other lectures that other professors have posted on the topic" (Jason). University students were more critical of the source of the information than were high school students, community college students, or individuals who were not in college at all. Participants were, however, more likely to trust the information if it was popular.

Popular technological tools. Popularity was also noted by nearly half of the participants as something that elicited their exposure to online activities. For example, participants also referenced the importance of popularity when discussing their exposure to Facebook, even when they were using a different social networking site regularly (i.e., MySpace). Most descriptions of MySpace use was when participants were in junior high or high school, and then the transition to Facebook occurred after high school or as they got older when MySpace became "kind of lame" (Kaitlin). It appears, however, that the transition from MySpace to Facebook was a permanent one for the 18, 19, or 20 year olds in this study, largely because of the popularity of Facebook. For example, when asked why she switched from MySpace to Facebook, Alma stated, "I think it's because everyone else was doing it too." Charlotte stated, "If no one is using it, it's stupid for you to use MySpace…I had to convert because I had no choice, essentially."

Although Charlotte actually had a choice, the popularity of Facebook made her feel as though she did not.

Participants also judged articles they read, videos they watched, or answers to questions based on popular votes or ratings. Kimberly used Facebook as an example and stated, "the popularity…if more people go, I go. It kind of relates like YouTube…if something that has 20 views or 200 views, I will go to the one that has had 200 views." Others paid attention to how articles or technological tools had been rated. For example, Noel said, "like at Ask.com or some website that people respond to questions…after a person responds to questions, people will hit 'useful' or 'unuseful.'" Participants, such as Noel, recommended the use of ratings because this was often how they judged whether or not an online activity or tool would be useful and thus, this influenced their decision to click on a particular link. This idea is similar to the structure of search engines, emphasizing the importance of being rated highly or "on top of the…list (Noel); thus, participants in this study would be more likely to be exposed to a program or technological tool at large,, if it is popular.

Advertisements. Advertisements were discussed by participants because I asked them specifically about advertisements. Participants, however, had conflicting views about advertisements, and less than half of participants ($n = 9$) recommended that I employ them to recruit individuals their age in an online program. Any participants that mentioned advertisements in the form of pop-ups had negative opinions of advertisements altogether. For example, Jason thought advertisements were "annoying…especially on YouTube when I'm trying to watch some music video, and they make you watch an ad first. The ones on the side, I don't really care about, but when they pop-up…Oh my gosh!" TP said, "because pop-ups are most of the time things that I am not interested in. Most of the time, they are dirty things or things that I do not want to know about at all. They are just annoying." Like TP, participants who referenced advertisements that related to their hobbies, interests, or current roles in some ways had more positive views of advertisements. Charlotte said, "like on Facebook, there are always lots of ads. There's always a side thing that has advertisements for different businesses and a lot of them I've actually clicked on, and I actually use them because they put ones in there that relate to you." Thus, participants were more likely to be exposed to online programs or

information if the advertisements were placed in technological platforms or tools they already used or if the content appeared to be something that related to their interests.

In summary, participants revealed that they were exposed to websites or online activities through referrals, search engines, and the popularity of the technological tool. Advertisements, especially those delivered through forums or places where youth shared common interests with others, were also discussed. The method of exposure to a given program depended on the content (or topic area), as well as participants' educational status, hobbies, interests, or current roles. Although participants were exposed to a website or online activity, they did not necessarily remain on that particular site or engage with the activity; in fact, the site or activity needed to have certain impressionistic features in order for participants to prolong their exposure.

Stage two: Prolonged exposure. The analyses revealed that once participants have been exposed to a program, they will log right back out or continue to participate, prolonging their exposure at a minimum. It is during this prolonged exposure phase that program features made impressions that facilitated whether or not youth would participate. The program characteristics (i.e., *having unique content, being aesthetically pleasing and ease of navigation, and allowing for choice and or connections*; see Table 10) impressed, intrigued, or annoyed participants enough to stay, come back to the site at least once, or leave before engaging in the material at all. It is important to note that impressionistic features served the purpose of prolonging participants' engagement, yet needed to be consistently maintained to continue to engage youth in the same manner. Again, it is important to note that the role of impressionistic features that prolong participants' engagement did not stop at this stage, rather it facilitated movement into the next stage and continued to influence youths' levels of engagement.

Unique content. Generally, participants used a search engine to help them generate content in response to questions they had or information they wanted to find. When they did this, they found a wealth of information; they sometimes found too much information. In fact, "it's almost overwhelming" (Julia). Therefore, if the content or perspective did not give youth the feeling that it was unique, it did not make any sort of impression with most of them ($n = 23$).

To be unique, the content needed to be new or presented to them in a different way. Noel discussed what would leave an impression and he said that if the topic was related to

Table 10

Prolonged Exposure, Conceptual Categories, Definitions, and Examples

Conceptual Categories	Definitions	Examples
Prolonged Exposure	Participants' descriptions of why they lingered on a website, blog, online activity, or online social networking platform because of certain impressionistic features	
Unique content	Participants' descriptions of how content that was new or presented in a way that was different from what they had seen before	Never finding the same thing twice when visiting a website; content different than what other websites have; presenting content they are familiar with (i.e., sexuality education) in a different way than what they heard/saw in elementary or high school
Aesthetically pleasing and ease of navigation	Participants' descriptions of their interests in a website or online resource because it looked professionally designed, was organized, or contained quality color schemes or graphics	Looking modern and not dated; clutter-free; ease of going from one page to the next on a website; a "good-looking" website was considered a form of credibility that facilitated their trust in a site and the time they spent on it when they first came across it
Choice	Participants' descriptions of prolonged exposure because they were not forced to provide information or participate in anyway	Going to a website, online activity, or blog that gives them the freedom to roam or participate without requiring one to sign up for anything or provide personal or contact information; pop-up advertisements or videos are an example of programmatic features that force participation and thus, do not facilitate "choice"
Connections	Participants' descriptions of staying on a website or coming back at least once because it allowed them to associate, bond, or communicate with others	Communicate or interact with friends or peers via Facebook; being able to connect with old and new friends or individuals they share similar interests with online; being able to learn more about others by viewing their pictures or profiles

"careers…and then, it must be unique like what other sites don't have." For example, London said, "I normally judge the information based on if I have ever heard it before." Artemis was intrigued by one blog in particular because it contained "unique items from different websites." Alex said he initially started going back to one of his favorite websites because "it allows for a lot of freedom of opinion and constant turnover of voices and topics; I never find the same thing twice when I visit the site." In addition to Internet information overload and appreciating unique content, some participants referenced experiencing "adult overload," or the "same" information that they have been taught or that adults have talked at them about for years. Maria, for example, said,

> I feel like if someone makes a program for the same things like protection or safety or things like that, people won't really pay attention to it or listen because they feel like it's been constantly drilled into them all the time. It's something we constantly learn about in school…everyone is constantly drilling it into you. It feels like an overload, so no one pays attention to it anymore.

Because of the Internet and adult overload, unique content is something participants valued, and if they were not getting this from a given website or online resource, they chose to find another source.

Aesthetically pleasing and ease of navigation. According to many participants ($n = 21$), aesthetically pleasing websites or activities include a look of professionalism, organization, or quality color scheme or graphics. The aesthetics of a site created an impression for participants. Alex said, "professional web design really creates a favorable impression for me." Participants talked about these features of websites or online activities that left unfavorable impressions on them and said it was "just too unprofessional compared to lots of other websites," (Noel), "the layout is boring," (Alma), or "too cluttered or too sparse" (Ben). After completing both online program reviews, Megan stated,

> Having looked at both "That's Not Cool" and "Real Teen Relationships," I think I realized even more how important design is. "Real Teen Relationships" didn't look very professionally made and seemed almost like it was designed several years ago. On the other hand, "That's Not Cool" looked much more modern and was easier to navigate, with a more cohesive color scheme and better graphics. It made "That's Not Cool" seem more credible, as if more thought were put into its production."

Many participants commented on the aesthetics and ease of navigation combined when talking about the impressions made by a program. Both the look and ease of moving through the site created a sense of credibility and trustworthiness among youth and thus, they were more likely to spend time on the site. Alex stated,

> If someone has taken the time to make a good-looking, easily navigable page, I'm more likely to spend time on the site and trust the information contained on it. I also make sure to find the site's sponsor or author, and I get skeptical if that information isn't obvious or easily found.

Choice. Although youth may get overwhelmed because the Internet has so many options for content, activities, or programming at large, the fact is they have the ability to make choices, and this was important to participants in this study. Many participants ($n = 21$) discussed their appreciation for having the choice to participate or not. When they reported feeling forced, they were more likely to log right back out of a given website or program. Many participants, like George, said they did not like it when they went to a website and "it immediately asks you to sign up for something. This is a major turn-off for me. I prefer sites that tell you what they're about and let you preview them before having you sign up for something, or better yet, not require you to sign up for anything." Ben's recommendations were to

> make it very accessible from the beginning. I know a lot of websites for you to comment, you have to create an account and enter your user name and your password, and then we will send you an email to confirm with us. That decreases user percent by 40 percent because no one wants to go through those extra 40 seconds.

Similar to their reactions to pop-ups, having to provide contact information or sign up for something before entering or going to another page annoyed them. Therefore, having the choice to participate or not was important to them and when a developer took that freedom away from them, many participants chose not to participate further and "exit out of them right away" (Maggie).

Connections. I defined connections as the need to associate, bond, or communicate with others. Many participants ($n = 20$) described their preference for being able to connect with others (with friends or peers) and discussed being able to establish or maintain connections as rationale for participating in the online activities they do. Facebook was used by all participants (except Cara, who had deactivated her account), had such a large presence in the daily lives of participants, and fostered connectivity with friends, family, and acquaintances. When I asked

participants why they go back to the same websites they do, many (referring to Facebook) said, "to communicate with friends," "it connects me with people from my hometown and allows me to share pictures or just say 'hi'" (Alma), or to keep in touch with "family who live everywhere in the United States." As such, connectivity was commonly coded as a preferred feature and as something that initially engaged youth or caused them to stay or linger on a site. Megan stated, "I know with Facebook… kind of the incentive is interacting with your friends and seeing what other people are up to and seeing pictures," indicating that this online activity provides an internal incentive that encouraged them to keep coming back.

Stage three: Engaged with the program. The analyses indicated that the degree to which youth were engaged, or their attention was interlocked with the content or technological tools, was dependent on the engaging delivery style, or approach used to present the material. When asking participants *why* they prefer or utilize some of the online technological tools they do, the theme regarding delivery style and categories (e.g., entertainment, interaction/feedback, expertise and experience, voice/tone, developmental relevance, authentic, variety) emerged. Although the delivery style had a significant influence on participant descriptions of when or why they were most engaged, their preferences for delivery style often depended on the content or emphasized the importance of developmentally relevant content. It was immediately apparent in the interviews that, although other program characteristics are important, the delivery style holds more weight with youth than the content or tools alone. For example, although many participants described their preferences for videos, it was the type or style of video that made the technological tool a valuable or credible source for participants. Alex said, "giving users the chance to provide feedback is vital…whether it's responses on Facebook or Twitter or a forum on the main site, these features allow the users to become engaged with the site and give them reasons to keep coming back." Although almost all participants discussed their preferences for social networking platforms (i.e., Facebook), it was their descriptions of *why* they preferred these tools that provided insight into how or in what ways they could be utilized to engage youth in online programs. Additionally, the analysis revealed that maintaining youths' interests is most difficult if there are only one or two activities or technolgical tools utilized, emphasizing the importance of *variety*. As such, categories for delivery style derived from the data because they represented the conditions, events or happenings that facilitated participants' descriptions of

engaging program content or technological tools. Although each of the features described in this section are critical to youth engagement, there is more for program developers to consider when ongoing participation is the goal.

Stage four: Highest levels of engagement that promote ongoing participation. The information in this section on online program retention refers to participants' responses to online activities or program components that have facilitated repeat visits or ongoing participation with a given website or online program. In other words, these are the features of the program that promoted the highest levels of engagement for participants. Only one participant (Hunter) discussed the use of external incentives for engaging online participants or encouraging them to keep coming back to the site. Hunter suggested to "Have incentives for coming…if they get so many points, then they could get a gift certificate or something like that." All other participants' recommendations for encouraging ongoing participation and engaging youth in online programs were internally focused and centered on 1) using engaging content, technological tools, and delivery style to motivate participants to keep coming back and 2) producing new and frequently updated content that can be related to their interests and developmental needs. It is important to highlight that although each of the program characteristics (content, tools, and style) highlighted thus far are important, it was the combination of these features that promoted the highest levels of engagement for youth in online programs or activities.

Content, technological tools, and delivery style. When I asked participants specifically how I could get participants to keep coming back to my program if I created one, the relationships between content, technological tools, and delivery style were consistent, and these relationships were motivating factors for youths' ongoing participation. For example, Ben talked about a particular website he kept going back to, and I asked why he did. He stated that the site had things that were relevant to his interests and "articles about video games and science things and cool videos." TP said, "choose an interesting but not too simple topic; design the website according to the topic." Thus, although participants said they were exposed to a program because of a technological tool or participated in online activities because it was an interesting topic, they were most engaged with the delivery style, especially when the style employed fit the topic.

Moreover, these program characteristics in combination with *content updates* (frequently and consistently updating online content) facilitated the highest level of engagement. For example, Alex said,

> Consistent updates are the most important thing. If you create a static page, people will have no reason to visit more than once. If you constantly update with new information or news, however, people will constantly be drawn back to your content.

Because most participants' responses for preferences for program characteristics were discussed when addressing research question one, they are not discussed in detail here; rather, the purpose of highlighting them again here is to emphasize the relationships between the program characteristics, online program exposure and ongoing participation.

If participants experienced prolonged engagement with a given site's content, tools, and delivery style, and the site was frequently updated, participants experienced high levels of engagement and participated regularly. Some participants believed that at this level of engagement, participation becomes more habitual. For example TP stated, "After awhile, you just have the habit of going to the website."

Insight from Program Review Forms

The participants' program reviews provided considerable insight into youths' preferences for online program characteristics beyond the interviews. The analysis involved participants' responses to my questions in the online review forms, including what they liked about certain activities or tools used in Real Teen Relationships and That's Not Cool, what they did not like, and what they participated in first to name a few examples. Additionally, I asked participants to list some of their favorite and least favorite websites, and I asked them to explain why they liked or did not like these websites (see Tables 11 and 12). First, the importance of the distinction between engaging technological tools and delivery style (rather than having one category for technological) was highlighted in the analysis of review forms. Second, new categories for emerged from the analysis of the program reviews (e.g., social media tools, popular technological tools, and choice). Third, analysis from the program review forms validated participants' interview responses and provided clarity on the construct, *developmentally relevant*. Fourth, the analyses of the review forms revealed ways that preferences for program characteristics are related to youths' developmental needs. Finally, the purpose of the website review form stage of this research helped provide a better understanding of program

characteristics, how they influenced youths' engagement in websites or online activities, and relationships between the program characteristics.

With regard to the distinction between technological tools and delivery style, many participants discussed how they used and preferred learning from or watching videos at large during the interviews. Participants' descriptions of the video on the That's Not Cool program home page, however, provided additional insight into the importance of the kind of video or how the video is made. For example, Ben said the video was his least favorite because "the production values and acting in the video are…poor, and the message-albeit a good one-was executed in a pretty cheesy manner." Participants did not appreciate acting in videos and placed importance on the quality of the production or overall appearance of the videos, as well as other technological tools. Although most examples for the categories and links between the constructs are discussed throughout this Chapter, this section highlights the distinct role of the program review forms in this research.

Although only a few participants discussed their preferences for social media tools (i.e., blogs, videos) in the interviews, participants' reviews of Real Teen Relationships revealed that the blog was their favorite part of the program or activity they spent the most time on. In addition, many of the participants gave examples of blogs they regularly visited when providing a response for "websites you like and why." Many of the reasons why they listed blogs as their favorite activity on the online programs they reviewed was because it provided information they could "relate" to, emphasizing again the role of developmentally relevant content, especially when they believed the information was written by students or individuals who had recently experienced the issue. The program review forms also elicited more responses about the importance of popularity of the videos. For example, when Charlotte was talking about the videos, she said she liked the videos, but that "funny" or "popular" YouTube videos would make it more interesting. Based on responses on *popularity*, such as Charlotte's from the program review forms, I went back and assessed the interview data and realized that others' had discussed the importance of the type of videos and in particular the relevance of *popular*, YouTube videos.

Table 11

Websites Participants Like and Rationale

Websites	Rationale for Why Participants Like the Site
Facebook	Connect with friends; easy to use; can interact with friends and others; updates; be in everyone's business
Ted Talks	Quick, easy; innovative/new ideas; unique speakers; videos; interactive; inspiring
StumbleUpon	Geared toward my interests/preferences; Find websites I didn't know about
Pinterest	Has anything you want (crafts, recipes, humor)
4chan	Content is user-generated; anonymity; allows for freedom of opinion; new voices, topics, and information; topic relevant to my interests
TV Tropes	Storytelling; user-generated content; organized; humorous; relates to my interests; broken up in manageable chunks
8tracks	Different playlists that people design; playlists help motivate me for different activities (e.g., cleaning, doing homework, getting ready to go somewhere)
Yahoo answers	Can ask random question anonymously; public opinions
Cracked.com	Frequently updated (new articles every day); informative on psychology, politics, and world events; Funny; feel like I'm actually learning when I read the articles even if the articles just include useless trivia; a lot on every page, but it does not seem overwhelming
Gurl	Easy to navigate; variety (surveys, blogs, pictures, questions and answers, articles, advice column, and more); relate to people my age
Instructables	Organized; can view and post projects; easy to navigate; fits the needs of people my age and those in younger generations that are more tech savvy.
Huffington Post	Updates; News; Easy to navigate

Table 11 (continued).

Websites	Rationale for Why Participants Like the Site
BBC	Interesting articles; current events
The Pirate Bay	Simple to use; easy to navigate; no gimmicks or banners to distract you; provides what it says it does (torrent files to be used with a bit torrent client)
Math Overflow	Personal interest in math; latest findings in this subject
A Cup of Jo	Blog where a woman is open about her fears and worries concerning her relationships and career; can relate to her and this kept me coming back; links to great websites; brings in unique items from other websites
Cosmopolitan	Advice
Jezebel	Blog geared toward younger women; updated all the time; variety of topics; progressive, youthful perspective
Bass Pro Shop	I'm an outdoors person and like to know about new hunting and fishing gear
Wikipedia	Instant facts; lots of information; easy to navigate; strong search engine so you can find information easily; Provides various language options

Table 12

Websites Participants Do NOT Like and Rationale

Websites	Rationale for Why Participants Like the Site
Hulu	Have to pay; have added annoying commercials
Associated Content	Too wide of a scope; topics not isolated in manageable ways; searches are overwhelming; contributors have different levels of authority
Time Cube	One crazy guy delivering a word rant on his worldview; no logical formatting; no opportunities for interaction; no claim to authority in authorship
Twitter	Too many people talking about their every move and being famous doesn't make it any more interesting; don't understand character limit thing; pointless; frustrating; have to re-tweet and can't just comment
FML (My Life)	Too many complaints from people I do not know or care about; entries outrageous and extreme; doesn't relate to my life
MSN	Boring design; sparse graphics make it look like there are just too many words on a page; too many links; no humor; not interesting
Google Plus	Offers nothing more than Facebook; No new Features; Poor layout
Wikipedia	No credibility because the authors can be anyone
Real Teen Relationships	Information does not pertain to me; not a good use of my time
My Space	Used when I was younger, but now I realize it is unsafe and juvenile
The Last Honest Guy	Crude and demeaning
Seventeen	Magazines are falling by the wayside; poor design; very messy and not easy to navigate; too many advertisements and content seems to be geared toward selling a product

The program review forms also emphasized the importance of *choice*. Youth preferred the option to be able to interact or for others to have this option, so they can read what they write, but they do not want to feel forced to participate. For example, Ben said "the first thing that annoyed me about the video [on That's Not Cool] was the fact that it automatically started every time you visited the home page, and you had to scroll down the page to stop the video." Although others liked the video, they echoed Ben's comments about the video automatically starting and not being given the choice to watch it or not. Alex said, "I would take the front page video off of autoplay for the annoyance factor."

Ben also elaborated in his recommendations by saying,

it would be beneficial to the site and to its visitors if there was a forum or easy 'ask a question' link where you could ask burning questions regarding relationships, either anonymously or using your first name. Additionally, there is a 'Relationship Bill of Rights' with quotes from high school students scrolling up one of the sidebars, but there is no way to add your own quote to this list. Being able to participate in this Bill of Rights would make visitors of the site feel like they are contributing more and like they are part of a group who experience the same relationship problems they do.

Thus, having the choice to participate influenced the way they engaged with the activities.

Analysis from the program review forms also validated participants' interview responses and provided clarity on both the importance of considering development and what participants considered developmentally relevant content. For example, during the interview Cara said that if she were developing a website for people her age, she would "not have it be based on shallow things," yet she appeared to experience difficulty in explaining what "shallow" content would mean. Although no one else mentioned this specifically in the interviews, similar themes emerged from the program review forms. For example, when answering how they would make a website similar or different than That's Not Cool or Real Teen Relationships, George said, "I would provide much more depth and specifics instead of having everything else so vague." Thus, it was not the content or topic itself, it was how it is written and the details provided that made it developmentally relevant. As such, participants' perceptions of the content were related to their engaging delivery style. Additionally, participants continued to emphasize the importance of age and the disconnect between adults and youth. For example, Ben said "Make sure…the writing voice is not too stuffy or adult like since it's aimed at this age. The last thing you want is to try to sound like that adult who is trying to sound like a kid." Although other

participants made similar comments in the interview, Ben did not mention this aspect of developmental relevance in particular. In this way, the program review forms validated information from the interviews.

Additionally, the analysis of the review forms revealed ways that preferences for program characteristics are related to youths' developmental needs. For example, Ben noted that youth need "solidarity" and thus, by watching what others like or do not like online, or learning from others' mistakes or faux pas, the youth evaluated and validated or discounted their own behaviors as right or wrong. Cara said,

> I spent the majority of my time reading through different blogs and the topics they were covering. Just because I do not necessarily find the information valid, I find it interesting to read other peoples' opinions on topics relevant to me…I found reading other people's thoughts to be more interesting than taking advice from a website and from people I do not know.

On his recommendations for doing something different with his review of Real Teen Relationships, Hunter said, "I would have a blog where people can talk about their issues and receive feedback on how to solve some of these problems." Although this online program had a blog section, it was not structure in a way that he could contribute. Thus, the insight from the interviews and program review forms combined provided an understanding of the ways in which entertainment and interactivity helped participants to explore and develop their identity.

Finally, the purpose of the program review form stage of this research was to gain a better understanding of program characteristics, acknowledging that it may be difficult for participants to discuss or explain their preferences for online program characteristics without being in front of a computer or being given something concrete to prompt discussion about this aspect of online programming. As a result of the program review form stage, I was able to gather information that provided links between participants' preferences for online program characteristics, exposure, and ongoing participation.   For example, linking developmental relevance and highlighting participants' ability to articulate it, Megan illustrated how two of the engaging delivery styles (i.e., tone and developmental relevance) are related by saying one of the online programs had "a condescending tone to it…as if the writer doesn't really remember what younger girls are actually like."

The Role of the Member Checks

The purpose of member checking was to validate results. All participants who completed this stage of the research ($n = 15$) agreed with the one page summary and none of them disagreed, or discounted my interpretations although a few added additional comments. All participants said they agreed and why, and no additional themes emerged although one of the participants (Kim) suggested that I add "consistency" to the retention (or ongoing participation) section based on her experience with Facebook. Kim stated, "it is attractive to people because content keeps changing, but when the programmers change the layout and formatting of the site, people become upset and frustrated." Kim had mentioned this in her interview as well, however, I did not add it as a stand alone category because no one else mentioned it and all participants, including Kim and with the exception of Cara who was skeptical of Facebook, used it regularly despite formatting changes. Although most participants simply wrote "Agree" with a few sentences, a few took the time to write a lengthy paragraph in response to the email I sent out. For example, Alex wrote,

> I fully agree that work paths are really important at this point in young adulthood. So many of my friends are having trouble finding/keeping work, and when they do it's often very unsatisfying. I particularly feel the point about networking, as so many of these interactions seem really forced and information about how or why or when to follow up on a connection is lacking. Concrete examples like role models seem like a good idea, but it also seems like it would be difficult to cover a wide enough range of fields to be relevant to a large portion of your demographic. I don't think that social skills can really be taught online, however, as much as young adults might want them to be….
> "Real" is definitely a good keyword. I guess I'm also unsure how to balance the importance of videos with the desire for interaction. Feedback is good and should be included, and updates are also key. You seem to have hit style concerns on the nose as well.

Emphasizing the role of choice, Sue said,

> I agree with your findings. The best way to keep our age group's attentionis to keep things updated. I think another thing to keep in mind is to make sure there are not a lot of "hoops" to jump through to sign up for the program. I honestly hate when I go to sign up for something and I have to promise five other things before I can even enter the site.

Although Megan talked about the struggles she had with career choices and the importance of the role models she had had for career-related decisions during the interview, she was surprised that work and careers was the most commonly coded content category. She said,

> Overall, I strongly agree with your results. I was initially surprised to read that work/career path related content was the most preferred content, but it then occurred to me that I've Googled things like "how to make a resume" and "how to prepare for a job interview" countless times. An online program with such advice would definitely be helpful.

Megan's comments validated the results of this research and also highlighted the fact that although older adolescents can talk about issues they have, they may not be able to fully articulate their needs for programming. Together, the interviews and program review forms provided rich data that allowed for a thorough analysis of which I was able to answer the research questions and develop the four stage model of developing online programs that engage youth. The participants' responses to the member checks validated the analysis.

Chapter Five: Discussion

In this Chapter, I present a summary of the research and discuss the findings as they apply to the two main research questions. Additionally, I provide recommendations for future research and outreach efforts in the area of online program development for youth along with a discussion of the limitations of this study.

Summary

The purpose of this study was to: 1) explore relationships between and among older adolescents' individual characteristics (e.g., demographic characteristics, Internet access, learning styles, experiences, and motivation or beliefs about online programs) and their preferences for program characteristics, and 2) provide an explanation for the various ways in which youths' preferences for program characteristics influence or effect online program participation by adolescents. Relationships between individual characteristics and program characteristics existed, as did those between program characteristics, online program exposure, and ongoing participation. This was evident in the interviews ($n = 27$) and program reviews ($n = 22$), and confirmed with the formal member checks ($n = 15$). Using grounded theory methods, a four stage model of developing online programs that engage youth emerged from the data. Each of the stages was derived from participants' descriptions of program characteristics (content, technological tools, and delivery style). Although it is important to note that program characteristics that initially engaged youth continued to influence their levels of engagement in subsequent steps, the precedence participants placed on the different aspects of the activity or websites and their descriptions of how they engaged with online content, websites, blogs and other activities provided the story for the different levels of engagement.

The four stage model suggests that youth prefer, and could benefit from, content related to work/careers, life and social skills, romantic relationships, and world views (i.e., that which allows them to explore religion or political issues). The content and technological tools provide a foundation for stage one, online program exposure, which highlighted the importance of referrals, search engines, popular tools, and advertisements. Youths' preferences for referral sources differed depending on the content (e.g., friends for relationship advice and professionals for work/career guidance) and the type of technological tools. For example, participants preferred referrals through social networking sites or advertisements in forums, popular tools in

the form of a viral video or something that was circulating because others had rated it highly. In stage two, prolonged engagement occurred when youth were able to connect with friends or others they shared similar interests with, as well as when they found the content to be unique, or the material aesthetically pleasing and easy to navigate through. In stage three, youth preferred a variety of content and multimedia and discussed several aspects of delivery styles that maintained their attention and interest in a given website or online activity (e.g., being entertained, expertise and experience, and having the opportunity to give/receive feedback or interact). Finally, in stage four, each of these components continued to influence youths' commitment to a website or online activity, but only when content updates were frequent and consistent; if the content was not updated, youth had no reason to go back and view the material on a particular website, blog, forum, or other places content was being delivered.

Research Questions Revisited

Research question one: What kinds of online program characteristics are older adolescents most interested in? The present findings indicate that the content youth prefer is consistent with the work of developmental scholars (e.g., Arnett, 2000; Erikson, 1968) in that youth are most interested in content that helps them to develop a healthy sense of identity and navigate their present and future roles (e.g., work and career paths, living on their own, romantic relationships, and individuality regarding politics and religion). Moreover, the types of content youth preferred in this study was consistent with research on youth and online activities; for example, research reveals that 62% of youth go online to get information about current events or politics; Pew Research Center—Trend Data, 2013).

Additionally, practitioners should consider incorporating technological tools that the majority of youth are already using (e.g., social networking, videos). For example, if 80% of youth participate in social networking platforms, such as Facebook (Pew Research Center—Trend Data, 2013), incorporating these tools or functions used by them (e.g., "liking," "sharing," or "commenting") should be something that is considered in online program development. When researchers have found a trend in the numbers of youth that utilize online tools (i.e., music, text, and images) to create their own materials (Pew Research Center—Trend Data, 2013, program developers could use these tools and information to facilitate youths' interaction with

the content or as a means of generating more content (e.g., by creating an application that allows youth to write their own music parodies or make their own videos in a specific content area).

The findings are also consistent with the idea that research and practice should emphasize positive youth development, viewing adolescence as a period of growth and fostering competence (rather than focusing on only negative behaviors) (e.g., Larson, 2000; Roth & Brooks-Gunn, 2003). In the conversations with youth, they did not say they wanted to learn about alcohol abuse, smoking prevention or intervention, or sexual risk-taking. Instead, their reports of content that they prefer centered on positive youth development. Although youth may need to be educated on problem-focused issues and topics related to risk-taking in adolescence or emerging adulthood, it would be difficult to expose them to problem-focused content unless they were mandated to attend, and even then, maintaining their attention or interest would be challenging if program developers rely on this type of content alone. At the same time, researchers have shown that positive youth development content can facilitate the prevention of problem behaviors (Catalano et al., 2004). For example, a program focused on work and careers could facilitate the prevention of problem behaviors by fostering content youth want to learn about, extending their social support system, and providing them with the confidence they need to be successful in work/career roles, so they are less apt to engage in risky behaviors. A program for relationships could focus on the types of things youth prefer to learn about (e.g., how to date or dating faux pas) and introduce issues that adults can also see as important less frequently, or rely on other types of program characteristics (e.g., instructional tools and delivery style) to relay problem-focused content in a manner that engages youth. This research supports the notion that "Creating opportunities for youth to imagine better futures may have a larger impact in preventing binge drinking, sexual risk taking, or violent bullying than interventions that target each of these problems as single health issues" (Flicker et al., 2008, p. 286). The findings in this study revealed that youth are more interested in learning from a positive youth development perspective versus focusing on problem behaviors. Although focusing on risk-taking behaviors in the areas of alcohol, drugs, and sex may be needed for many youth, many participants in this study believed these issues have been "preached" at them for years in school or other types of formal educational settings. Thus, they are not likely to search for an online program that teaches this material in the same manner with which they are familiar with. To

reach youth with this type of content, programmers may want to carefully consider the role of content they *do* want to learn or technological tools (e.g., social networking platforms, videos) and style (e.g., entertaining) they prefer.

In addition, these findings indicate that youth would benefit from media literacy content that helps them to be aware of the ways in which social media influences their daily activities. With the rise of the Internet, media literacy has been used interchangeably with computer or cyber literacy and is a broad term used to describe one's ability to access the Internet, analyze or interpret media messages, critically evaluate the role of the media, and create content that fosters literacy in these regards (Christ & Potter, 1998; Livingstone, 2003). In the present study, social media was a recurrent theme (e.g., platforms, tools, or functions used by platforms) that engaged participants. For example, youth discussed social networking platforms and videos which they used daily, described the desire to be able to give and receive feedback online, and talked about their addictions to social media and their expectations for receiving daily content updates. Additionally, youth preferred to learn in an environment where they could interact, give and receive feedback, were entertained, and could get quick answers to specific questions they have. Because social media had such a large presence in the lives of all of the participants in this study, content surrounding this issue could help youth analyze and evaluate how technology influences their daily routines, including their ability to balance work or school and other areas of their life, as well as the way they communicate in personal and professional situations and their expectations for reactions from others. It is possible that many youth are unaware of the amount of time they spend on social networking sites (i.e., Facebook), or the extent to which such activities distract or detour them from productivity regarding work and careers.

Additionally, many youth struggled to communicate with professionals in face to face settings; the same struggles were evident in their personal relationships. For example, some youth were accustomed to texting or communicating virtually, and face to face communications appeared awkward for them. A few participants also described negative interactions with employers, supervisors, teachers, professors, or college administrators, and some of these experiences could be attributed to how they are accustomed to communicating via social media; for example, some youth may believe that those they interact with want feedback and need to critically analyze when or how they should give it outside of cyber space where it is encouraged.

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Some youth were aware of the influence of technology, and others were not even aware of the ways their interpersonal skills were negatively impacting their personal or professional relationships. The variety of youth experiences highlights the individuality in their preferences for program characteristics, which also influenced the meaning that online programming had for participants, as well as their descriptions of whether they choose to use, or not use, online educational resources, specifically those that promote positive youth development.

It is important to highlight the fact that with the exception of one participant, all other youth who participated in the interviews said they had not participated in an online program when asked although many acknowledged visiting websites for answers to questions regarding work/careers, life skills, relationships, or other areas about which they had questions. It is possible that participants had, in fact, participated in asynchronous online programs that were structured to promote their learning in a certain area, yet the term *program* was not something to which participants could relate to because practitioners were not calling it such. In fact, when initially asked if they had ever participated in an online program, participants were much quicker to reference online college courses or online dating websites than they were outreach activities. Although there are a variety of terms used to describe online programming among practitioners (e.g., online, web-based, computer-mediated, website), these analyses highlight the disconnect between the terminology used by youth and that used in research. This likely stems from experience and training, yet it is possible that the inconsistency impedes efforts to improve online program recruitment and compliance.

In addition to the analyses regarding terminology, these findings emphasize the role of developmentally relevant and engaging content, technological tools, and style as factors that influence whether or not youth choose to use an online educational resource. For example, youth preferred content that pertained to their age group and in particular the participants, who were older youth, appeared disengaged with content geared toward "teenagers," or younger youth. This also relates to the fact that participants also wanted content that was authentic, unique, and new. Although the research on cognitive development in later adolescence, in particular, is limited, "there is growing evidence that maturational brain processes are continuing well through adolescence" (Steinberg, 2005, p. 69), emphasizing the importance of enriched environments and offering a possible explanation for participants' preferences for new and challenging material

that they can relate to their own lives. Older youth, in particular, may be more engaged with content that is relatable, yet encourages them to think critically about the issues at hand. In addition, one common denominator among an entertaining delivery style (e.g., humorous content) was others' (e.g., peers) mistakes or short-comings, which also has developmental implications. Although "entertaining," youth may be using the mistakes they see others make online or the ways that their peers critique or ridicule other people as a means of judging themselves, learning from others' mistakes. "Two principal ways adolescents find group acceptance is by developing and exhibiting personal qualities that others admire and by learning social skills that ensure acceptance" (Rice & Dolgin, 2005, p. 285). At the same time, it is possible that learning from others' mistakes could facilitate negative or risky behaviors, emphasizing the importance of adult guidance and feedback throughout the program. In this study, youth described the Internet as a means of being able to share advice, experiences, or opinions and receive feedback from others, indirectly or anonymously exploring others' perceptions and experiencing solidarity or discord. Certain types of delivery styles allow youth to explore and develop a sense of identity and agency, and developmental scholars have described the Internet, at large, as a potential tool that provides adolescents with "other means of experimenting with and constructing selves" (Cote & Bynner, 2008, p. 262). Although these aspects of development are missing from most program evaluation efforts with youth, each of these examples highlights the need to continue to view online program development and evaluation through developmental lenses.

Developmental scholars also help to explain the role of individual differences in program development efforts. In this study, youths' experiences, preferences and their views of technology at large were influenced by a variety of intervening conditions which included resources, such as money, technological access, social network support, and skills at large. For example, some youth were technological novices, whereas others were more advanced users and had experience with programming, highlighting the need for researchers and practitioners to consider these differences related to the digital divide (e.g., access to technology or financial resources that influence access) as this influenced youths' preferences for content, technological tools, and delivery style. Research has shown that individual perceptions of technology usefulness and ease of use of technology influences intentions to use it (Venkatesh & Davis,

2000). Thus, youth with fewer resources and or experiences with certain types of technology (e.g., smart phones) may be less inclined to use it because it appears too complex or unfamiliar or because they have not had the same opportunities to see value in it as those with more resources and experiences. Similarly, focusing on self-efficacy and building on classic developmental work (e.g., Bandura, 1982), others have looked at youth's perceptions about their ability to successfully use online learning technology (Bates & Khasawneh, 2007), indicating that with under-resourced youth, researchers and practitioners may need to carefully consider how they will help them relate to the content (e.g., topics they are interested in learning about) or use an engaging delivery style (e.g., entertainment) to overcome barriers related to their self-efficacy surrounding any advanced technological tools employed.

In addition to this type of mentoring for under-resourced youth, the findings related to how social networks influence youths' knowledge and preferences for program characteristics emphasize the importance of adult role models, lending support to research that highlights the need for positive mentor relationships in youth programming (e.g., Jarrett, Sullivan, & Watkins, 2005). Although online programs may be asynchronous where youth can navigate content on their own time, youths' reports of the feedback they prefer from more experienced adults, specifically in work or career-related topics emphasizes the importance of their zone of proximal development and opportunities for adult mentors to provide scaffolds, helping youth reach their developmental potential (Vygotsky, 1978). Differences were found in the advice participants reported receiving from their social networks or the salience their social networks placed on skills related to work, careers, communication, and life skills. As such, the role of youth development, as it relates to their social networks and the different levels of mentoring youth need, should be considered in future research and program efforts. More research is needed to fully theorize about the complexity surrounding these issues. This research highlights the need to continue to examine the role of individual characteristics and how such diversity and contextual issues influence youths' preferences for program characteristics, especially when they each play an important role in how participants were exposed to online activities or websites and because of their role in participants' higher levels of engagement and ongoing participation.

Research question two: How do older adolescents' preferences for program characteristics influence their exposure to and participation in online programs? Because a comprehensive framework for developing online programs for older adolescents was missing from the existing literature, I believed it was important to explore links between youths' preferences for program characteristics, program exposure, and ongoing participation. I have examined the data using a grounded theory approach, but am applying the findings to program development frameworks that have already been established in the literature. The findings from this study support the notion that program characteristics (e.g., engaging content, tools, and delivery style) are imperative to engaging youth in online programs, which Hughes and colleagues (2012) broadly highlighted in their framework for developing online outreach programs. This research and the four stage model of developing online programs that engage youth supports some of these practices, yet centers on one developmental stage (older adolescence) and exposes nuances that are often unaddressed in the program development literature (i.e., the different pathways for different content) and in program evaluations among youth (i.e., individual differences).

The findings presented here also support the notion that youths' exposure to online programs is low, yet increases with content that is personally relevant, when youth have the opportunity to interact, and the navigation is easy to follow (Crutzen et al., 2009). In addition, this research emphasizes the role of youths' choices. Youth discussed the array of information that is available to them on the Internet as they described the way they searched for information or answers to specific questions. Although program developers may create research-based content that is needed by youth, it does not mean they will be exposed and or participate in a given program. Youth must be engaged by relevant, new and unique content, and technological tools and delivery style were meaningful to youths' online experiences in distinct ways. For example, all youth described watching online videos and being able to use them in some way. However, they were not engaged by all videos. In fact, youth reported being annoyed or frustrated when videos popped up as they were reviewing the two online programs. Thus, the delivery style and the way the material was presented played a vital role in the utility of the tool itself. In fact, when youth believed they were forced to participate (e.g., having to provide emails or contact information before proceeding or not being able to avoid pop-up videos or

advertisements), they were likely to turn to other sources where they were given the freedom to choose to participate. Further, the fact that youth preferred to be referred to work-career related information or websites from teachers, professors, or experienced adults, whereas friends or peers were more trusted sources for relationships highlights the association between content and exposure. This common phrase of "it depends on the content" also linked the topics covered to exposure, as well as delivery style, emphasizing the relationships between program characteristics and exposure. Further, the components that played a role in youths' exposure also maintained their interests and influenced their ongoing participation. This comprehensive data that highlighted the interdependence yet independent role of each program characteristic in outreach recruitment and engagement efforts developed from interviews with youth and online program reviews and was validated with the member checks.

The four-stage model provides a framework for reaching youth with content and technological tools they prefer. At the same time, the findings revealed that it may be especially challenging to reach youth in program efforts when they do not see the need or value of the content (e.g., youth that described negative experiences but did not recognize the role of his/her own social skills, or youth that see value in relationship education content, but admit that they would not likely search for information about it). As such, what youth prefer is not always what they need, but if the content is supported with other program characteristics youth prefer (e.g., technological tools and delivery style), adults will be more likely to reach and engage youth. Thus, I am not implying that youth cannot be reached with the content if they do not recognize a need or prefer to learn about it; instead, I believe this research highlights the imperative role of program characteristics they *do* prefer, fostering the need for more insightful, youth-centered research and meaningful program development processes. In the recommendations, I elaborate on how to reach youth and expose them to online programs, as well as how to maintain their interests, encouraging ongoing participation. This is important because the findings related to the four stage model require more research; at the same time, the model derived from this research provides implications for practitioners to comprehensively plan and evaluate their efforts.

Recommendations for Research

Although this study extends the literature in several ways and provides several paths for future efforts in the area of developing online programs for youth, it is not without limitations. Although researchers agree that some generalization needs to take place (Onweugbuzie & Leech, 2007), the goal of qualitative research is not to generalize beyond a sample to the population. Although I was able to draw conclusions about developing online programs that engage youth, I cannot ensure participants in the present study would not be outliers if using other methods. To form a theory, more research (e.g., through a larger sample size and quantitative methods) beyond the qualitative methods employed here is needed. Further, it is possible that sampling efforts place additional limitations on the findings. For example, part of the recruitment criteria for this study was that the participants have access to the Internet. It is possible that sampling youth who do not have computer skills or access to the Internet could provide additional insight into reaching the most under-resourced youth (e.g., youth who live in high poverty, remote areas). The focus of this study was on online program delivery as an opportunity to reach older adolescents, yet online program delivery may not be the best option to reach all youth, specifically those that do not have access to the Internet or that are not willing to communicate via the Internet. Although this sample was diverse, future research should more closely examine these issues with a representative sample, emphasizing the importance of how, when, and *who* benefits from online programming rather than assuming it is a viable option for all youth. For example, the findings regarding differences for technological novices and those with more experience with online programs or technology at large indicate that technological experience may influence online program participants' expectations or engagement; this factor should be examined in future research. Additionally, the findings indicate that future research should closely examine the role of participant sex; because males may be more reluctant to certain types of programming (e.g., content that promotes healthy romantic relationships), it would be useful to gain a better understanding of innovative efforts that are effective in recruiting and engaging young men, specifically with content they may not seek on their own.

Furthermore, the design of the program review forms and member checks required youth to respond to me via email and Microsoft word documents. A few youth reported struggles in saving the Microsoft Word document. It is possible that using Microsoft Word as a means of

communicating with youth influenced retention (e.g., between interviews, program review forms, and member checks). Additionally, the highest response from this study came from the initial online questionnaires where youth could provide data via an electronic survey. As such, I recommend using electronic survey methods in future efforts with youth.

These findings represent one of the first attempts to explore how youths' preferences differ by individual characteristics and context, including but not limited to age, sex, work or college status, ethnicity, technological skills, financial resources, and rurality. The present study supports previous research that indicates that program characteristics influence outcomes (e.g., Webb et al., 2010). Future research could examine individual characteristics, as well as program characteristics (engaging content, technological tools and delivery style) as potential mediators or moderators of program effects through advanced quantitative methods and with a large sample size. Although the types of engaging tools will change with modern technology, the present findings indicate that researchers need to continue to assess the role of such tools or "modes of delivery" (Webb et al.), as well as the style that accompanies them.

Programs for youth have historically been built on principles of effective programs for adults, which "impedes efforts to provide more theoretically guided, developmentally appropriate services to children and adolescents" (Cicchetti & Toth, 1992, p. 489). The youth who participated in this study offered a vast amount of insight into how to engage people their age with online programs. One change that I made to the interview protocol within my initial interviews was the way that I worded the questions in order to form a deeper connection to participants. For example, I realized that youth were much more receptive to providing recommendations and helpful tips to me when I explained to them that I believed in the importance of "bringing youth to the table" when creating programs for people their age and asked, "if I were to create an online program for people your age, what would you recommend…?" as opposed to asking what they recommend for online programs in general. I believe that by asking for their preferences in this way, the youth felt invested in the process, and several youth commented that they would like to see results, or that they would be interested in helping me if I actually did begin to design a program for people their age. Based on my interactions with youth and their responsiveness to helping me when I told them I wanted to use these data to create a program for people their age, I believe that participatory action research

would be a useful approach in future program development efforts. Participatory research is a methodology where researchers consider themselves as guides to participants, who are empowered because they are engaged in each step of the process: collecting the data, analyzing it, and disseminating the results (Small, 1995). Research has shown that giving adolescents the opportunity to help design the program may increase the likelihood of program effectiveness (Flicker et al., 2008; Larson, Walker, & Pearce, 2005). With online programs, the success of a participatory action research plan would rely on the ways in which youth are engaged in designing and evaluating the program, and this approach has been used among youth (e.g., the e-PAR model to engage youth in health promotion; Flicker et al.). Although models, such as this are relatively new and formal evaluations of the process and impact are needed, they represent one technique to create youth-focused programs, "linking participatory action research with the rapidly evolving field of youth media, result[ing] in positive youth experiences in community action" (Flicker et al., 2008, p. 298). "Because action-oriented research models recognize the inherently reactive nature of the research process, they can guide program developers and evaluators in making the evaluation an integral part of the program itself." (Small, 1995, p. 951).

Along with considering developmental and participatory approaches, researchers need to continue to assess the role of internal and external incentives. Although numerous program evaluators focus on the role of external incentives to help with program exposure or ongoing participation (e.g., Celio et al., 2002), the findings of the present study highlight the fact that program characteristics play an important role in engaging youth and support the notion that internal incentives may be more important than external incentives; researchers have argued that external incentives can, in fact, undermine youths' internal motivation to learn (Deci, Koestner, & Ryan, 2001). Future research with cognitive evaluation theory may help to explain how external incentives influence youths' internal incentives and their motivation to participate in online programs. According to cognitive evaluation theory (CET; Deci, Koestner, & Ryan, 2001), youth learn best in environments that facilitate their self-determination and subsequently, intrinsic motivation to participate and learn. From this perspective, rewards can be *informational* (conveys self-determined competence and thus, intrinsic motivation) or *controlling* (lowers self-determination and undermines intrinsic motivation) (Deci, Koestner & Ryan, 2001). A controlling award includes tangible rewards that are contingent on participants' engagement or

completion. Similar to the $20 gift cards awarded to participants after completing different steps in this study, these controlling awards encouraged individuals to participate, but they did not promote their competence in anyway way. It is possible that most participants continued to be engaged with the research process because they were motivated internally, experiencing feelings of competence when I told them how insightful they were or how much their responses had contributed to what I knew about developing online programs for their age group. Thus, for these youth, the informational rewards that promoted their self-competence could have facilitated their ongoing participation in this study, and the tangible rewards may have lowered the self-determination for some, contributing to attrition. The same principles could be applied when recruiting youth to an online program or considering incentives that motivate their ongoing participation. Fostering activities that promote youths' self-competence (e.g., by allowing them to provide feedback to others or learn from the mistakes that others make) could facilitate their motivation to participate. In their review, Deci, Koestner, and Ryan (2001) found that with the exception of verbal rewards (positive performance feedback), all other tangible rewards undermined participants' intrinsic motivation. Thus, the verbal rewards or the encouraging tone used by an online facilitator may be an example of a reward that promotes competence in an online program. At the same time, more research is needed on the types of online program characteristics that promote competence. Although this research revealed types of program characteristics that engage youth, more information is needed on whether or not this was because the content, technological tools, or delivery style promoted self-competence. Future research could examine this issue with self-competence measures, assessing youth-driven program elements that facilitate initiative, decision-making, or other leadership traits that promote youth competence (e.g., see Larson et al., 2005 for more examples). This could be done through participatory action research in early stages of program development and through quantitative surveys in more advanced stages. Regardless, more research that explores relationships between self-determination, motivation, and promoting youth competence in online learning environments is needed. Future research should more closely examine the role of individual factors, as well as how motivation differs for youth who are actively involved in the research process (i.e., through participatory action research) or whether or not their engagement differs as a function of age, generational cohort, or stage (e.g., college freshman, sophomore, junior, or

seniors). Nonetheless, the present analysis emphasizes the need for cognitive evaluation theory and other developmental perspectives in combination with a broader framework for understanding online program development to ensure links between research and outreach.

Recommendations for Outreach

The findings in this study provide several implications for outreach. First, scholars make assumptions about being able to reach more youth through online efforts than possible through traditional programs. However, the Internet brings youth a vast amount of choices and thus, when developing online programs practitioners need to carefully consider the role of internal incentives. The findings in this study revealed that program characteristics (e.g., social media or entertaining delivery style) facilitate youths' internal motivation to participate. Focusing on program characteristics that internally motivate youth to participate as opposed to emphasizing the need for some type of external incentives (e.g., money, tickets to an event, or other tangible reward) requires a learning-centered rather than a technology-centered approach. Although the capabilities of technology are important and it would be easy for practitioners to focus on this, especially when practitioners rely on asynchronous programs to solve issues related to budget cuts and staff reduction in a tough economy, outreach efforts will likely fail when efforts to reach youth and maintain their interests fall short in the focus on technology. Instead, this research suggests that the capabilities of technology should support learning-centered approaches rather than using an approach that solely focuses on the capabilities and benefits of technology in online programs for youth. For example, the findings in this study show that the highest level of engagement is supported by frequent and consistent updates; practitioners could use user-generated content for updates (as social networking sites such as Facebook and Twitter do), or they could use more advanced technology to help maintain content and ensure consistent updates (e.g., Hootesuite) rather than solely using technology to create a static website that does not encourage ongoing participation. Further, from a business perspective, asynchronous programs thrive on both reach and ongoing participation as they increase possibilities for both word of mouth and paid advertisements when grant support is unavailable or ceases. Although the time and effort put into engaging youth may take more initial resources, they may decrease the need for external incentives long-term. As such, focusing on the program components that youth are

motivated to participate in long-term is potentially valuable to both program impact and sustainability.

Second, although some technology (e.g., texting and cell phones) may facilitate negative communication behaviors, these results highlight the need to view technological tools as valuable delivery systems for reaching and teaching older youth. Some may argue that the over emphasis on technology may enable contemporary youth by encouraging them to spend more time online when they already struggle to balance life priorities or experience issues related to face to face communication (e.g., when time on Facebook impedes schoolwork or face to face interaction important for social skill development). These findings reveal, however, the importance of engaging youth with technological tools they prefer and already use daily. As such, online efforts can help adults get on youths' levels. Additionally, the fact that youth engage with the Internet and multimedia daily highlights the potential value of using media literacy content as a tool for getting youth to critically think about how social media influences their social skills, helping them to develop both cognitively and social-emotionally. For example, youth could analyze the influence of technology on their own interpersonal skills, including confidence and comfort communicating face to face. Outreach education could provide knowledge related to when it is acceptable to give feedback or provide an understanding of how youths' expectations for communication should vary across contexts. For example, expectations for giving or receiving feedback among friends or peers may need to be significantly different from their interactions with professionals. Additionally, the emotional coddling that many youth may receive from friends on Facebook (in reaction to their posts about daily events) may not depict the reality of what they can expect in work or school settings. Further, these findings highlight the need for creativity in outreach efforts and media literacy content could help with this. For example, although many youth were interested in learning about romantic relationships, many (especially young men) were less likely to voluntarily search for information or participate in an online program for this topic. Practitioners could incorporate examples of healthy or unhealthy relationships into media literacy content, fostering creative approaches to getting messages across through other topics that youth are more willing to participate in.

Lastly, this research highlights the significance of collaborative efforts between youth, researchers, and outreach educators. For example, the terminology that practitioners use and the

meaning this has for youth and their participation influences program efforts; this is important because how practitioners define programs may limit their ability to study and understand how to reach their audiences. Youth may not relate to the term, *program*, or find it intimidating, which implies that practitioners may reach and relate to more youth by using terms they are familiar with (e.g., website, game, application). At the same time, outreach efforts need to be continuously evaluated. Thus, although practitioners may not call their online efforts, "programs," they need to continue to evaluate them as such. Additionally, the recommendations for research (e.g., participatory action research, the mediating or moderating role of program characteristics, developmental relevance of program efforts) emphasizes a need for a collaborative effort between researchers and practitioners; together, they can view online program development as a process and monitor their efforts to gain an even better understanding of how practitioners can be most successful in developing online programs that engage youth.

Conclusion

Despite the fact that there is more work to be done, this study contributes to the literature by providing a model for developing online programs that engage youth, emphasizing the role of important program characteristics that can increase youths' exposure and ongoing participation in online programs. Although positive youth development programs promote social-emotional, cognitive, and behavioral competencies, they are not generally mandated as those that focus on problem behaviors are (e.g., alcohol use/abuse as a requirement for beginning college students; Croom et al., 2008) despite the argument that they should be. Because of this and the fact that youth have choices, it is important for researchers and practitioners to continue to work together, carefully considering how online program planning and evaluation efforts can be synthesized in order to improve reach and impact of programs designed to help youth develop a healthy identity and skills that make them successful throughout their transition to adulthood.

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EARN UP TO $60 FOR PARTICIPATING IN STUDY

Online Programs For Youth

To be eligible, you must:

- 18-20 Years Old

- Have access to the Internet and be willing to participate on your own time

- Speak English

The purpose of this study is to learn more about you, your interests, and what types of online program content and design you prefer. This information will help to improve online programming for people your age in the future.

For more information, contact Jill Bowers (bowers5@illinois.edu)

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Appendix B: Demographic Questionnaire

1) What is your age?

    a. 18 years old
    b. 19 years old
    c. 20 years old

2) What is your gender?

    a. Female
    b. Male

3) Please the city, state and zip code of the town you call "home." (Open Ended)

4) How would you describe your relationship/marital status?

    a. .Single and never been married
    b. Single and have been divorced
    c. Living with a partner you are committed to
    d. Married
    e. Seperated/Divorced
    f. Remarried

5) Do you have children?

    a. Yes
    b. No

6) How much formal education have you completed?

    a. Some high school
    b. High school graduate
    c. 2 year college degree (community or junior college)
    d. 4 year college degree (bachelor's)
    e. Post graduate degree (Master's, JD, PhD, MD, etc..)
    f. Other (leave blank)

7) How much formal education has your mother completed?

    a. Some high school
    b. High school graduate
    c. 2 year college degree (community or junior college)
    d. 4 year college degree (bachelor's)
    e. Post graduate degree (Master's, JD, PhD, MD, etc..)

f. Other (leave blank)

8) How much formal education has your father completed?

   a. Some high school
   b. High school graduate
   c. 2 year college degree (community or junior college)
   d. 4 year college degree (bachelor's)
   e. Post graduate degree (Master's, JD, PhD, MD, etc..)
   f. Other (leave blank)

9) Does your family (the family you grew up with) own a car, van, or truck?
   a. No
   b. Yes, they own 1 car, van or truck
   c. Yes, they own 2 or more

10) Growing up, did you have your own bedroom that you did not have to share with anyone?
   a. No
   b. Yes

11) Growing up, how many times did you travel away on a vacation with your family?
   a. About once each year
   b. About twice each year
   c. More than twice each year

12) How many computers does your family (in the house where you grew up) have, including laptops?
   a. None
   b. One
   c. Two
   d. Three
   e. More than three

13) Which of the following best describes your ethnic background?
   a. African American or Black
   b. American Indian or Alaska Native
   c. Asian or Asian American
   d. Native Hawaiian or Pacific Islander
   e. Hispanic, Latina, or Latino
   f. Caucasian or White
   g. Other (please specify)

14) Which of the following best describes the type of disability you have (if any)?
   a. Blind or other visual impairment

b. Learning disability (for example, one that impacts your ability to read, write, or process information)
c. Mobility impairment (for example, you cannot move your hands)
d. .Hearing impairment
e. .Speach impairment that would prevent you from participating in a conversation online
f. Seizure disorders
g. Other (please specify
h. I do not have a disability (or at least not that I am aware of)

15) Please choose one of the following options that best describes your current living situation.
a. Live with parents or another adult who mostly pays for my housing and food
b. Live with at least 1 roommate
c. Live by myself

16) About how often do you access the Internet?
a. Several times a day
b. About once each day
c. 3-5 times per week
d. 1-2 days per week
e. Every few weeks
f. Less often than every few weeks
g. I have not accessed the Internet prior to this study

17) If you use the Internet daily, how many hours per day do you spend on the Internet?
a. Fewer than 2 hours
b. 2-4 hours
c. 4-6 hours
d. 6-8 hours
e. More than 8 hours

18) Where do you go online most often?
a. Home
b. Work
c. School
d. Public Place (e.g., the library or coffee shop)
e. Other (specify)

19) What kind of Internet access do you use (answer for the computer you use most often)
a. Dialup (phone line using a modem)
b. Broadband (Cable, DSL,LAN, etc…)
c. Don't know or not sure
d. Other (please specify)

20) Which of the following devices do you access the Internet from the most?
   a. Cell phone
   b. Desktop
   c. Laptop
   d. Other (specify)

Appendix C: Electronic Consent Form

Thanks for clicking on the link to this survey and for being willing to learn more about this study. The purpose of this study is to learn more about you, your interests, and what types of online program content and design you prefer. This information will help to improve online programming for people your age in the future.

This is part of a dissertation research project and will be conducted by Jill R. Bowers (bowers5@illinois.edu) from The Department of Human and Community Development at The University of Illinois at Urbana-Champaign under the direction of Dr. Aaron Ebata, Associate Professor in the Department of Human and Community Development from The University of Illinois at Urbana-Champaign (email: ebata@illinois.edu; phone: 217.333.2912).

There are 4 parts to this study that I am asking you to participate in:
1) First, I will be asking you to fill out an electronic survey, which should take you 10 minutes or less to complete. There are 20 questions that ask about your demographic characteristics (e.g., age, gender, education, and relationship status to name a few) and Internet access and experience (e.g., how often and where you use the Internet).
2) If you are eligible for this study, I would like to interview you about your interests, talents, and preferences for various types of topics or activities. The interview will take approximately 1-2 hours.
3) Third, if you are eligible and complete Step 2, I will be asking you to help me by reviewing two online programs. For this, I will email you two forms which you will complete by looking at two different online programs. I will be asking you about the types of activities and other things you like or do not like about the programs you review. This will take you approximately 1 hour.
4) If you have participated in all other steps outlined above, I will send you the results of the study. These results will be in the form of a 1 page summary. The results will represent how I interpreted the interviews I conducted with you and others, as well as of the reviews of online programs. I would like you to review them to make sure I have summarized the information accurately. This will take you approximately 30-60 minutes.

I am offering those who complete both steps one and two a $20 gift certificate to Target, Amazon, or Best Buy (your choice). To be eligible for this gift certificate, you must complete both the electronic survey and the 1-2 hour interview. I am offering an additional $20 gift certificate if you complete step 3 and yet another if you complete step 4. Therefore, you have the opportunity to earn up to $60 in gift cards from Target, Amazon, or Best Buy. The gift certificates will be sent to you via email within 30 days of completing each step.

Participating in this research is treated in a confidential manner and voluntary. You can skip any questions that you do not want to answer, and you can quit at any time. If you wish to click during step 1 (this electronic survey), simply click on the "Exit This Survey" link. I do not expect that there are any risks to your participation beyond those that exist in everyday life. All of your answers will be treated in a confidential manner. While you will be asked to provide a name and email during the initial survey, only the two investigators

listed on this form (Jill Bowers and Dr. Aaron Ebata) will be able to see your names on the initial survey. After that, you will be asked to use a pseudonym or "fake name" for each additional step that you complete as a volunteer (for example, the interview, the online program review, and the feedback you have about the initial results of this study). In other words, only the individuals listed on this page (Dr. Aaron Ebata and Ms. Jill Bowers) will have access to the files with your real name or email on it. We will never share your personal information with your name with anyone else.

If you have any questions regarding your participation, please contact Jill Bowers (bowers5@illinois.edu). Additionally, you can contact Dr. Aaron Ebata (ebata@illinois.edu) if you have any questions about this study or regarding your participation. If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu.

You can print out a copy of this page for your records by clicking on the "print" button on your browser. **By clicking on the "Next" button below, you are confirming that:**
-You are between 18 and 20 years old,
-Speak fluent English,
-Have access to the Internet to participate in various parts of this study, and
-You have read and understood your rights and consent to completing the first step of this study, the 20-item questionnaire.

Sincerely,

Jill Bowers, MS
Department of Human and Community Development
University of Illinois
Email: bowers5@illinois.edu

CONSENT TO PARTICIPATE

Title: Online Programs for Youth

Investigators: Aaron Ebata, PhD and Jill Bowers, MS

                                Department of Human and Community Development

                                University of Illinois at Urbana-Champaign

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Purpose of Research Study

We are from the Department of Human and Community Development at the University of Illinois. The purpose of this study is to learn more about you, your interests, and what types of online program content and design you prefer. This information will help to improve online programming for people your age in the future.

This is part of a dissertation research project and will be conducted by Jill R. Bowers (bowers5@illinois.edu) from The Department of Human and Community Development at The University of Illinois at Urbana-Champaign under the direction of Dr. Aaron Ebata, Associate Professor in the Department of Human and Community Development from The University of Illinois at Urbana-Champaign (email: ebata@illinois.edu; phone: 217.333.2912).

Procedures
You have already completed the initial survey online (through Survey Monkey). Now, I would like to interview you about your interests, talents, and preferences for different types of topics or activities that may be incorporated into online programs for people your age. This interview will take approximately 1-2 hours. This interview will be audio-recorded.

If you choose to participate in the interview, I will also be asking you to help me by reviewing two online programs. You would be doing this on your own time at a computer of your choice that has Internet access. To review the two online programs, I will email you two forms which you will complete by looking at two different online programs (or "websites") online. Reviewing the two online programs and completing the form will take you approximately 1 hour. If you choose to complete the interview, I will be asking you for your email so that I can send you the two online program review forms.

If you have participate in the interview and the online program review (as described above), I will send you the results of my study. These results will be in the form of a 1 page summary. The results will represent how I interpreted the interviews I conducted with you and others, as well as of the reviews of online programs. I would like you to review them to make sure I have summarized the information accurately. This will take you approximately 30-60 minutes.

Incentives
I am offering those who complete both the initial survey (which you already completed) and the interview a $20 gift certificate to Target, Amazon, or Best Buy (your choice). To be eligible for this gift certificate, you must complete **both** the electronic survey and the 1-2 hour interview. I am offering an additional $20 gift certificate if you complete the online program reviews (reviewing the two online programs as described above) and yet another if you send me feedback on the results I send you. Therefore, you have the opportunity to earn up to $60 in gift cards from Target, Amazon, or Best Buy. The gift certificates will be sent to you via email within 30 days of completing each step.

Confidentiality
All of your answers will be treated in a confidential manner. While you were asked to provide a name and email during the initial survey, only the two investigators listed on this form (Jill Bowers and Dr. Aaron Ebata) will be able to see your names on the initial survey. I will use email to correspond with you (to send/receive the online program review forms and the results of my study/your feedback of the results). I will use a pseudonym or "fake name" for you from here on out. I will tell you what that name is before we begin the interview, and I will use this name throughout the interview and ask that you do the same throughout your participation in the remainder of this study (for example, when you use your own name in a sentence, when you complete the online program review form, or when you provide feedback on the results of this study. Doing this, only the individuals listed on this page (Dr. Aaron Ebata and Ms. Jill Bowers) will have access to the files with your real name or email on it. We will never share your personal information with your name with anyone else.

Risks/Discomforts
Participating in this research is treated in a confidential manner and voluntary. I do not expect that there are any risks to your participation beyond those that exist in everyday life. You can skip any questions that you do not want to answer, and you can quit at any time.

Benefits
The information that I gather from interviewing you, from reading your online program reviews, and your feedback on the results of this study help inform online program development efforts for people your age. What I learn will help me and others develop and evaluate online programs and make recommendations to others so that online programs and websites are relevant and helpful to people your age.

Questions you may have about this research study

If you have any questions regarding your participation, please contact Jill Bowers (bowers5@illinois.edu). Additionally, you can contact Dr. Aaron Ebata (ebata@illinois.edu) if you have any questions about this study or regarding your participation.

If you have any questions about your rights as a participant in this study or any concerns or complaints, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls will be accepted if you identify yourself as a research participant) or via email at irb@illinois.edu.

By signing this form, you agree with the following statements:

- I am 18 years of age or older.
- I have read and understand the above consent form and voluntarily agree to participate in this study.
- I give permission for my interview to be audio-recorded
- I understand that I will be given a copy of this consent form for my records.

_____   _____

Participant Signature   Date

Appendix E: Initial Interview Protocol

[After initial introductions]. As I mentioned, I am interested in helping improve online programs for people your age.

1) When I say, online programs, what does this mean to you?

Online programs can be structured websites. For example, some websites may help you to learn through some type of game, blog, or a question/answer session. Online programs may also be self-studies. For example, people who are interested in a certain topic, can find a website that discusses this topic and download a video of someone talking or they may be talking in front of a PowerPoint screen. There is a range of ways that something may be considered an "online program"

2) In what ways have you participated in online programs in the past?
3) What kinds of information to you search for online?
4) What types of online program do you prefer or do you think would prefer?

As I mentioned, many people are creating online programs. When I say "online programs" here, I am referring to some program that you could access online at home or wherever you access the Internet on your own time. In other words, I am not referring to one you would participate in for an online college course.

5) If you could take some kind of online course on any topic, can you describe a topic that would make you most interested in participating? *In other words, what topics do you believe you need to learn more about?*
6) What topics do you believe other people your age need to learn about that you *already* know about?
7) If you ever search for programs or websites on this topic, what words or key phrases do you use?

I'm interested in hearing about issues that many people your age care most about.

8) How would *you* describe what people your age are most concerned with?
9) How are your own concerns different than concerns of other people your age?
10) How are your own concerns similar than concerns of other people your age?
11) How do work or career roles, romantic relationships, religion, politics, or other issues impact your daily lives?
12) *Think about what you would like to do in the next 1-2 years.* How have you been prepared for the roles you anticipate having in the next year? For example, if you are going to college, how will you prepare for that role? If you are planning to work for pay, how will you prepare for that role? If you plan to get married, how will you prepare for that role?
13) What kinds of things do you think you will need to learn about to be most successful in the next few years?

14) How are the things you *want* to learn about different than the things you think you will have the opportunity to learn about?
15) What other things would you be interested in learning about?

Everyone has strengths and weaknesses.

16) How would you describe your strengths?
17) What are some things you would like to work on?
18) People have a range of talents. Some may seem small and others, large. Think of a talent you have. How could some of the talents you currently have be used in online programming?

I would like to learn more about your relationships with other people.
19) Think of one person you have a positive relationship with. Describe this relationship.
20) Think of one person you have had a negative experience with (for example, someone else your age, a teacher or college professor, a boss or coworker, family member). Tell me more about this experience.
21) What characteristics do you look for in a romantic partner if any?
22) What is your personality like in romantic relationships?
23) Is your personality the same in romantic relationships as they are in your relationships with friends or peers?
24) What are your roles and responsibilities in romantic relationships?
25) What are your roles and responsibilities in friendships?
26) How is your relationship with your parents?

Some people believe that people your age learn in different ways. For example, they say that some people are more visual learners and others learn better from listening to someone or something.

27) How would you describe what kind of learner you are?
28) Describe a presentation that you have heard on or offline that left an impression on you.
29) How could people who create online programs help others who have the same learning style as you?

Of all the people your age that I will be talking with, I believe that many of you will have different opinions or beliefs about the Internet.

30) Based on your experiences, how do you think that online programs could help you compared to face to face programs?
31) When thinking about the activities that you participate in online, how do you believe the Internet or modern technology has changed you?
32) What kinds of challenges do you experience when you are online?
33) In what ways do you believe your past experiences with computers or the Internet would influence the type of technology you use or online program you choose?

34) What is your personality is like online compared to your face to face interactions with other people your age or adults who are older than you?
35) What types of activities or people make you feel intimated online?
36) What types of activities or people make you feel confident online?
37) How is communicating with others online is easier for you (compared to face to face interactions)?
38) How is communicating online more difficult for you (compared to face to face interactions)?

Many people are concerned with what others think of them, and some people your age believe that people are always watching them.

39) How can you relate with people who are thinking about others are constantly watching or judging them?
40) If you think about others "watching" you online, describe how this makes you feel.
41) When thinking about others watching you, describe who you would be most worried about and why. For example, some people may be more concerned about being "watched" online by friends, peers, family, etc…
42) Describe some reasons why you may be concerned with remaining anonymous online. In other words, how would it make you feel to have your name posted next to something you've said?

You can complete some programs online at the same time with other people. An example of this may be an online support group where participants all log in at a certain time every week. Other online programs are set up to where you can complete them at your own pace/on your own time. An example of this could be an online support group where you participate at different times; for example, you may go on at one point and post a comment or question and someone may answer or comment on your post at a later time.

43) Describe the type of program that you would like to participate in on your own time.
44) Describe the type of program that you would like to participate in if you had to log on at a certain time.

All programs have what I would call "different voices" or "tones" that relay information to you. For example, some online programs may present information in a humorous voice or tone. People who use humor may present information informally. Others may sound more "professional."

45) Describe your preference for the type of "voice" or "tone" that you would prefer to learn from. In other words, if there were text or an instructor providing some kind of information to you, how would you describe the type of personality or style you were prefer that that information be presented in?

I noticed that you said you usually use your [cell phone, desktop or laptop] to access the Internet.

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46) How do you use your time on the Internet?
47) What kinds of activities do you spend most of your time on when you are using this device to access the Internet?

Many people prefer different types of activities online. For example, some people like to watch videos online. Others like to listen to music, play games, use mobile applications, participate in storytelling etc…

48) What different types of online activities have you seen or participated in?
49) What kinds of activities are you most drawn to or how do you spend most of your time online?
50) When you are watching or participating in these types of activities online, in what ways do you interact with others?
51) Describe the type of people you prefer to interact with online.
52) What types of online activities make you feel frustrated?
53) What types of activities online cause you to get annoyed, even to the point where you shut down your computer or turn off your mobile device?
54) Describe your reactions to advertisements or other kinds of pop-ups.
55) If you've used video, please explain how you use videos online.
56) If you've used music or music production in some way, describe how you did this.
57) What kinds of activities bore you?

Some people like to have multiple pages open and participate in multiple online activities at ones. Others prefer to only do one thing at a time.

58) Describe how you participate in multiple things at once online.
59) How do your preferences for participating in one or multiple online activities compare to your friends? In other words, describe the ways your friends participate in multiple things at once online?
60) Are you and your friends also doing others things while you are online?

As I mentioned before, there are many different kinds of online programs for people your age. For example, some online programs are websites that provide information to people your age. Others are self-studies where people could follow through a PowerPoint or simply a bunch of written words about a particular topic.

61) Think about participating in some kind of online program that had a topic you were interested in finding more information about. In your perfect world, what would the facilitator look and act like (if you would even prefer a facilitator).
62) Who would you prefer to learn with if there were other people participating with you?
63) What types of things do you look for in an instructor?
64) Describe the types of things that teachers or instructors could do to make you interested in the content of an online program?
65) What type of teachers or instructors motivates you to learn?

66) What ages would you prefer for teachers or instructors to be (if this matters at all)?
67) If you were creating a program that did not have a guided facilitator or instructor that was there with the audience live, describe how you would make sure your audience learned something? How would an "ask the expert" feature be more or less useful than a guided facilitator.

Program developers often think about how they are going to recruit people your age into their program. For example, some people may believe that it takes money or "free stuff" to get you to participate. Others may believe that if that content is interesting "you will come."

68) How do you feel about the use of incentives for people your age in online programs?
69) What types of incentive would encourage your initial participation in a program? In other words, what types of things would make you decide to participate in a program? For example, some people offer cash to each people and others put you in a drawing so by participating, you have the opportunity to win. Others may have a competition for a bunch of people the same age or offer tickets to a sporting event.
70) How would incentives matter if you were already excited about the topic? In other words, if you were excited about a certain topic and wanted to learn more about it, would you participate in it even if no incentives were offered? Would you ever participate in an online program without incentives?
71) How would incentives make difference if someone was NOT excited about the topic that was being covered?
72) If your friends participated in a program, how could they be your "incentive"? In other words, would you keep going back if your friends did to? Do you have examples of when you have done this?
73) Do you have any ideas for how other adults (e.g., teachers, business professionals, or actors/actresses) could be used as incentives (e.g., business professionals could talk about certain careers you are interested in or actors/actresses could give relationship "dos" or "don'ts")?
74) What types of activities or program topics make you keep going back to the same places online?
75) What types of activities or program topics make you want to never go back to a particular site?

Appendix F: Online Program Review Form

General Instructions:
I would like you to fill out the review form below while you are looking at the two online programs: Real Teen Relationships and That's Not Cool. This activity will take you approximately 1 hour. The purpose of this activity is to get your opinions of what works and what doesn't in online programming for people your age. I would like for you to tell me specific things that you like (or don't like) about the topics covered and activities that you can participate in on the websites you are reviewing.

I did not create the websites you are reviewing, and I do not know the people that did. I simply chose the websites that I did because some people your age participate in them. It will be helpful for me to know what you like or dislike about the programs so I can tell other people that might be creating online programs for people your age what you like and do not like.

I do ask for your pseudonym or "fake names" because I will be asking other people your age to answer the same questions, and I want to make sure I keep each of your reports in separate files. When I report the results, I will not say your real names or report any of my results in a way that other people might be able to tell who you are.

If you are willing to continue and participate in this stage of my study, please proceed and fill out the two forms.

Review Form #1

Your Pseudonym or "Fake Name" for this study:

_____

Before you begin, please take 5-10 minutes to go through the program or "website" and get a feel for what is on each site. You do not have to enroll or provide any personal information on the website. I am just asking that you review it.

Review questions:

How are the topics covered in the *Real Teen Relationships* program relevant to your own life? Please provide specific examples here:

What kinds of activities do you see on the site? *Examples of activities may be videos that you can watch, a link to Facebook, question and answer sessions, a Blog, or stories/scenarios, but there may be others that you see that I do not mention here.*

Which activity do you go to or participate in first?

What kinds of activities did you spend the most time looking at or participating in when you went through this website?

Which activities were your **favorites**?

Why were these activities your **favorites**?

Which activities were your **least favorite**?

Why were these activities your **least favorite**?

The activities on this website are just a few examples of what online program developers can include. What other types of activities do you think might be useful or engaging to people your age?

Why do you like these activities you've described above?

If you were designing a program, or website, for people your age, how would it look similar or different to this website?

Think of 1 other online program or website that you find interesting or that holds your attention. If you cannot think of one that you spend a lot of time on already, do a brief search and find one that you like. Please list the name of the program or website and provide the link here:
Please why you chose this site and why you like it.

Think of one other online program or website that you do NOT find interesting or that you would NOT like to participate in. If you do not already have one in mind, try to do a brief search and find one that you do not like. Please list the name of the website and provide the link here:

Please tell me what you do NOT like about it.

Until now, did you look at *who* was providing the information on this website? For example, was it sponsored by a college/University or a business of some kind? If you did look to see who provided this information before I asked, why did you do this? If you did not, why didn't you?

Describe how you normally judge how reliable the information is on a website or in an online program? In other words, what types of things makes you trust an online program?

If I were creating a website or an online program just for you and other people your age, is there anything in particular that can tell me that would help me to do this?