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THE FORMATIVE EVALUATION OF A FAMILY LIFE EDUCATION
WEBSITE

by

Brynn Marie Blake Steimle

A thesis submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Master of Science

Department of Marriage, Family, and Human Development

Brigham Young University

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BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Brynn Marie Blake Steimle

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

Date

Stephen F. Duncan, Chair

Date

Terrance D. Olson

Date

Thomas B. Holman

BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Brynn Marie Blake Steimle in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

Date

Stephen F. Duncan
Chair, Graduate Committee

Accepted for the Department

Thomas W. Draper
Graduate Coordinator

Accepted for the College

James M. Harper
Director, School of Family Life

ABSTRACT

THE FORMATIVE EVALUATION OF A FAMILY LIFE EDUCATION WEBSITE

Brynn Marie Blake Steimle

Department of Marriage, Family, and Human Development

Master of Science

Hundreds of family life education (FLE) websites are now available on the Internet, allowing individuals and families unprecedented access to FLE information. Evaluation is critical to ensuring the quality of and improving FLE websites, yet few FLE website evaluations have been conducted. This study formatively evaluated a new family life education website, called *Forever Families* (<http://www.foreverfamilies.net> or <http://foreverfamilies.byu.edu>), assessing website utilization using Web-based software, and receiving visitor feedback through the use of an online survey. Quantitative survey items assessed knowledge gains, how interesting the content was, usefulness, attractiveness, ease of use of the website, whether or not the site met visitors' needs, and to what extent the website led visitors to reconsider former attitudes and decide to make changes in their lives. The researcher sought to discover whether there were statistical

differences in participant ratings by demographic variables. Open-ended items requested further information to assist the researcher in understanding the quantitative responses. Statistics compiled by Web-based software revealed that the website was highly utilized by individuals throughout the world. Participant ratings of the website and responses to open-ended items revealed the website was well received and had a positive impact on the participants. Website ratings did not substantially vary by participant characteristics, except for education level and ethnicity. Participants provided many helpful suggestions for website improvement.

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I. INTRODUCTION

The Advanced Research Projects Agency (ARPA), a group of university researchers supported by the U.S. government, was founded in the 1950s and sought to connect computers at different universities in such a way as to allow them to communicate with each other (Webopedia). In 1969, ARPA had success, connecting computers at four universities in California and Utah over a network called ARPAnet (Leiner et al., 2000). Over the years ARPAnet evolved into what is now known as the Internet (Leiner et al.).

When the ARPAnet was first developed and when the Internet first became available commercially in the early 1990s Web users were mostly young, White, highly educated males (Tan & Clark, 2000). But since that time, Web use by women, minorities, and low SES families has increased and continues to increase such that the population of Internet users is progressively reflecting the general population (Rainie & Packel, 2001; Tan & Clark, 2000). Individuals of all ages from diverse ethnic, religious, educational, and economic backgrounds now have access to the Internet, using it for a variety of purposes, including to access educational information (Lenhart, Simon, & Graziano, 2001). Among the educational websites available are hundreds of family life education (hereafter, FLE) websites (Elliott, 1999). According to Elliott (1999), a FLE website is one that has the goal of strengthening families and individuals, is educational in nature, avoids a focus on therapy, and addresses one or more of the topic areas from the Framework for Life-Span Family Life Education (National Council on Family Relations).

Several studies have assessed the utilization of FLE websites (i.e., Ebata, 2003; Hughes, 2001; Morris, Dollahite, & Hawkins, 1999), but only one published study has collected visitor feedback in an attempt to assess outcomes (Grant, Hawkins, & Dollahite, 2001). Grant and colleagues discovered that the site being evaluated had a positive impact on the study participants, but the study was limited in its reach.

The dearth of FLE website evaluations leaves many questions unanswered. Is the Internet a productive venue for disseminating FLE information? What is the potential impact of FLE websites? Do ratings of FLE websites vary by visitor characteristics? In addition to general questions about FLE websites, each website has specific questions needing to be answered. Some of these may include: To what extent is the website being utilized; do visitors think the website is useful, attractive, informational, interesting, and easy to use; does it meet the needs of its visitors; and does it lead visitors to reconsider their attitudes and decide to make changes in their lives?

The purpose of this study was to answer these questions through formatively evaluating a new research- and faith-based family life education website: *Forever Families*. Through this study, the researcher gained an insight into visitors' perceptions of the overall value of the *Forever Families* website, and what changes should be made to improve the website's utilization and effectiveness. In addition, the study contributes to the literature on Web-based FLE evaluation.

II. LITERATURE REVIEW

In this section, the researcher will discuss how the Internet is used in education in general and family life education specifically. Next, FLE website evaluation, guided by the Jacobs program evaluation model (Jacobs, 1988) will be discussed. Then, the few FLE evaluations that have been conducted to date will be discussed, followed by a discussion of the recently launched *Forever Families* website.

Seeking Educational Information on the Web

Internet researchers estimate there are currently about 161 million adult Web users in the United States (ETForecasts, 2002). Looking beyond the United States, one group of Internet researchers estimates users reaching 6 million in Africa, 187 million in Asia and the Pacific, 190 million in Europe, 5 million in the Middle East, and 33 million in Latin America, with a global total reaching more than 600 million users in 2002 (Nua, 2002; see also ETForecasts, 2002; United Nations, 2002). In addition, the amount of time Internet users spend online is increasing, almost universally (Nielsen//NetRatings, 2002a).

The increased availability of the Internet to individuals and families and the rise in the amount of time spent online makes the Internet a powerful and convenient venue by which to disseminate educational information. Studies have supported what conventional wisdom suggests—the Internet is perceived to have great educational value (Horriggan & Rainie, 2002; UCLA, 2000). In one study, 16% of the participants (adult Internet users) reported that most days they use the Internet to find the answer to a question and 80% reported they have used the Internet for this purpose at some time

(Lenhart, Simon, & Graziano, 2001). In another study, 71% of the parents reported that they had learned new things and 21% said they found assistance in dealing with daily challenges in their lives through the use of the Internet (Allen & Rainie, 2002, p. 4). Individuals are increasingly turning to the Internet for all kinds of information, including matters of personal and family well-being. Because the Internet is a powerful medium that has much to offer family life educators (Elliott, 1999; Hughes, 1999; Morris et al., 1999), over the past few years, many FLEs have developed websites (Elliott, 1999). There are currently hundreds of FLE websites available online (Elliott, 1999).

FLE Website Evaluation

Every family program warrants an evaluation to one degree or another (Jacobs, 1988), including FLE websites (Grant et al., 2001; Hughes, 2001; Hughes, Ebata, & Dollahite, 1999; Morris et al., 1999). Evaluation is necessary to document the value of a website, to gain information for a website's improvement, and to justify future investment into the website (see Small, 1990). In addition to studying website utilization (Hughes, 2001), Hughes (1999) suggests there are three important aspects of Web-based FLE that warrant evaluation. These are the content of the website, the way in which the website is delivered, and the usability of the website. It is also important to consider how ratings of the website vary by visitor characteristics, to ensure a website meets the needs of its visitors. A few important demographic characteristics warranting consideration are discussed below.

Gender

The literature suggests that gender has an influence on the utilization and acceptance of family life education (Palm, 1997). Men frequently underutilize traditional FLE programs, but the Internet may better meet their needs for information (Grant et al., 2001). Men still dominate the at-work online population 60% to 40%, although females have a slight majority (51%) on the at-home online population (Nielsen//NetRatings, 2002b).

Ethnic Group

According to Nielsen//NetRatings (2002c), about 90% of Web users are White. Only 75% of the total U.S. population is White (U.S. Census Report, 2002), thus Whites are still overrepresented on the Web in the United States. However, the number of Web users in most ethnic groups has increased since 2001, with the Hispanic population representing the highest growth rate of any group (Nielsen//NetRatings, 2002c). FLE website evaluations should seek information that reveals whether a website is useful to users from diverse ethnic backgrounds.

Education Level

Education level does not necessarily affect one's ability to become a proficient Web user. This is evident by the fact that many teenagers (Lenhart, Rainie, & Lewis, 2001) and children are more Internet-savvy than their parents. However, families with Internet access are headed by adults who are more educated than the general adult population. About 37% of adult Internet users in the U.S. have a college or graduate degree (Pew Internet, 2000), compared to about 24% in the total U.S. population (U.S.

Census Report, 2002). FLE website developers have the challenge of creating content that is interesting and applicable to those with literacy challenges, without excluding educated visitors.

Other Characteristics

Various other characteristics should be taken into account by FLE website evaluators, depending on the nature and purpose of the site being evaluated. For instance, an FLE site that is faith-based may benefit from categorizing website ratings by religious affiliation. Evaluators may also want to assess the usefulness of sites by identifying various family characteristics (i.e., marital status and parental status) of the users.

In conducting a website evaluation, it is tempting to evaluate outcomes from the outset. However, as emphasized by Jacobs (1988), not all programs, especially new ones, warrant a full-scale outcome evaluation; evaluation approaches should be appropriate for the age and stage of a website.

The Jacobs Model of Program Evaluation

The Jacobs model is among the most widely used to guide program evaluation research (Jacobs 1988; see also Bailey & Deen, 2002; Callor, Betts, Carter, Marczak, Peterson, & Richmond, 2000; Hughes, 1994; Small, 1990). The five tiers of the Jacobs model, as they have been adapted for the purpose of evaluating the *Forever Families* website, are (1) website pre-implementation, (2) website utilization, (3) visitor satisfaction, (4) progress-toward-objectives, and (5) website impact. Each of these is described below.

Tier one: Website pre-implementation. At this stage of evaluation, a problem is identified and a website proposed to meet the need at hand. The target audience is identified and members of that audience are consulted in order to understand what type of website is needed (Dumka, Roosa, Michaels, & Suh, 1995; Jacobs, 1988; Small, 1990). Incorporating the target audience into the development of a program can help a group to feel ownership over the program, making it more likely that they will use it in the future (Dumka et al.). If a prototype of the program is being pilot tested, this stage is improvement-oriented (Dumka et al.; Patton, 1997). In-depth interviews and surveys are useful methods for approaching the target audience. Focus groups are another useful method (i.e., Dumka et al.).

Tier two: Website utilization. This stage of evaluation involves assessing the utilization of a website. According to Jacobs (1988), it is important to know if a program (or a website) is actually being used, and if so, to what extent and by whom.

The Internet simplifies the process of conducting a utilization evaluation with Web-based software such as SuperStats (see <http://www.superstats.com>), which collects information about the number of unique visitors, return visitors, and page views; amount of time per visit; most popular pages; and so forth. Further information about a website's visitors can be gained through the use of an online survey.

Tier three: Visitor satisfaction. Tier three is improvement-oriented (Patton, 1997, p. 68), and involves collecting visitor satisfaction feedback, usually through the use of a survey, in an effort to improve a program early in its development (Jacobs, 1988). At this tier, a researcher can gather important information about website visitors' likes and

dislikes about the website's content, the way in which the website is delivered, and the usability of the website (Hughes 2001), in addition to other areas. This information allows researchers to preliminarily assess the worth of the website and provides information for website improvement.

What researchers learn about the extent of visitor satisfaction at this tier can prevent wasted resources on a website that has extreme flaws, or justify the continuation and future evaluation of a website. As pointed out by Small (1990), "Good formative evaluation can provide the type of information that will lead to program improvement and ultimately greater program impact if and when an outcome evaluation is conducted" (p. 133).

Tier four: Progress-toward-objectives. The purpose of evaluation at this tier is to determine whether a program is successful at meeting its goals. Evaluation at this level often is done after programs are well-established. Items assess website visitor perceptions of knowledge gains and modification of attitudes, as well as gather stories revealing changes put in place as a result of website information.

Tier five: Website impact. At tier five, researchers assess long-term outcomes (Jacobs, 1988). According to Small (1990), evaluation at this stage "involves more sophisticated research methods and designs, and attempts to . . . contribute to the knowledge in the field, and perhaps compare the effectiveness of various program approaches" (p. 133). Efforts at this level often span more than a year, and when possible, use experimental or quasi-experimental designs (Jacobs). Tier one having already been

addressed, this study evaluated the *Forever Families* website primarily at tiers two and three.

FLE Website Studies

To date, few studies have focused on FLE websites. The researcher has located a total of four, none of which has addressed nor controlled for participant demographic characteristics. First, Morris and colleagues (1999) used qualitative methods to systematically study six fatherhood websites. Their goal was to discover how FLE websites were being used, by examining ethical and practical issues. The ethical issues examined were individualism, agency, and responsibility (whether or not the six sites encouraged fathers to be responsible); the definition of good fathering; and the level of intervention of the websites. The practical issues were who developed the sites and why, whether or not the sites were father-friendly, the development and structure, and the utilization of the websites. The researchers did not consult the websites' visitors in conducting the study.

Second, Hughes (2001) conducted a utilization evaluation examining page views, visitors, engagement of visitors, and origins of visitors over time for a website for FLEs (<http://www.hec.ohio-state.edu/famlife>), using Web-based software. Third, Ebata (2003) conducted a similar utilization study of the Parent to Parent (P2P) website (<http://p2p.uiuc.edu>). In the near future, researchers will use a survey to evaluate this website's usefulness (Ebata).

Finally, Grant and colleagues (2001) also used Web-based software to collect utilization data for the FatherWork website (<http://fatherwork.byu.edu>), but in addition,

they requested feedback from website visitors, employing quantitative and qualitative methods, making it the only published study of its kind. At the end of each educational module available on the FatherWork website, four quantitative items were available to visitors, inquiring about the extent to which the module gave the fathers useful ideas, emotionally affected them, motivated them to make improvements, and increased their commitment to being good fathers. The visitors were asked to rate these items on a four-point scale. Qualitative comments about the website were collected from website visitors in two ways: 1) Web visitors could leave comments about the website in the virtual guestbook, and 2) Web visitors could directly email the researchers their comments. The researchers did not collect information about visitor characteristics, but from the qualitative data they concluded that 75% to 80% of the participants were men, most of whom were fathers.

Grant and colleagues (2001) found that the website received about 100 visitors per day, and the fathers who visited were positively affected. The study participants indicated the website gave them ideas to use in improving their fathering, affected them emotionally, motivated them to greater action, and deepened their sense of responsibility to be good fathers. Participants' open-ended responses revealed their appreciation for the website, and helped researchers further understand the quantitative data. This study revealed the potential for a FLE website to have a positive impact on its visitors.

These four studies set a precedent for conducting utilization studies, but only the study by Grant and colleagues (2001) consulted website visitors for feedback. However, the sample sizes in this study were relatively small (about 230 for each of the items); the

study focused only on fathers; differences in website ratings by the demographic characteristics of the participants were not considered; and the number of items was minimal, leaving many questions important at the formative level unanswered. To better understand the impact of Web-based FLE on visitors, more comprehensive evaluations are needed (Grant et al; Hughes et al., 1999; Morris et al., 1999).

The Forever Families Website

Forever Families (<http://www.foreverfamilies.net> or <http://foreverfamilies.byu.edu>) is a new family life education website sponsored by the School of Family Life at Brigham Young University. The website provides practical, scholarly, and faith-based educational information to individuals, married couples, and families of all faiths within the framework of *The Family: A Proclamation to the World* (hereafter, the Proclamation; The First Presidency and Council of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints, 1995). This framework emphasizes the nature and importance of marriage, families, and parenthood, coinciding with the faith traditions of many world religions (Madsen, Lawrence, & Christiansen, 2000).

The *Forever Families* website's target audience includes parents, couples, and individuals who are interested in learning about and promoting Proclamation principles in their homes and communities. The website is an information and skills site, designed to promote change (Morgaine, 1992). It is desired that through using the *Forever Families* website, visitors will increase their knowledge of Proclamation-supporting scholarship; use ideas derived from the website to strengthen their marriages and families; and increase levels of personal, marital, and family well-being.

Tier One Evaluation: Website Pre-implementation

During the early stages of website development, a prototype website containing six articles (Family Strengths, Forgiveness, Marital Harmony, Marital Conflict, Prayer, and Family Traditions) was designed as a vehicle to obtain initial, pre-implementation feedback on the website. The prototype website was reviewed by participants in six focus groups ($N = 32$; mean age 42.7; 56.3% female; 56.3% college graduates; 90.3% White; 78% LDS; 87.5% married, 9.4% divorced, 3.1% single and never married; median income of \$60,000). Care was taken for both a male and female facilitator to be present at each focus group, and the location was the same for each group. The focus groups were tape recorded and later transcribed for analysis. Participants gave feedback and provided many helpful suggestions for website improvement. Based on the results of these preliminary data, refinements were made to the format and content of the website. One important insight shared by the participants was that Web users prefer information that is easily read in a short period of time. Based on this information, articles were shortened to 1,000 to 1,500 words. Links to expanded versions of the articles were made available on the site for those interested in more detailed information. In addition, articles were edited to be more readable for a lay audience. A professional editor was hired to assist in this process, as was recommended by focus group participants.

Other heeded suggestions included changing the articles from PDF files to HTML pages, which are more attractive and inviting and easier to read; removing unprofessional clipart images; and adding links to related websites. Also, many additional articles on various topics were added to the website. With the addition of these articles, it was

necessary to divide the website into content areas. The content areas, derived from the Proclamation (The First Presidency and Council of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints, 1995), include: Preparing for the Covenant of Marriage; Principles of Successful Marriages; Sacred Responsibilities of Parenting; Supportive Extended Families; Physical and Spiritual Needs of Children; Principles of Successful Families; Sanctity of Life; Divine Nature and Destiny; Communities Strengthening Families; and Challenges, Marriage and Family Life. These improvements were made to the website prior to its official launch on August 12, 2002.

Summary and Conclusions

In summary, the number of Web users is burgeoning, and individuals from all backgrounds are becoming more likely to have Internet access. The Internet is a useful medium for disseminating educational information, thus, hundreds of FLE websites are now available (Elliott, 1999). Very few of these sites have been evaluated. Only one published FLE website evaluation to date (Grant et al., 2001) has collected feedback from Web visitors themselves. This study showed that the FatherWork website positively impacted its visitors. However, this study was narrowly focused and had several limitations.

Because of the small number and lack of depth of prior studies, many questions have remained unanswered. To better understand website utilization, the potential impact of Web-based FLE on visitors, how website ratings vary by visitor characteristics, and how websites can best meet the needs of their visitors, more comprehensive evaluations are needed.

Through this study the researcher sought to add to the understanding in the literature through formatively evaluating the newly launched *Forever Families* website. The current study, using the Jacobs model as a guide, assessed website utilization and visitor satisfaction, and gathered some early impact information. This study addressed the following research questions:

1. To what extent has the *Forever Families* website been utilized—specifically, how many unique visitors, return visits, and page views have there been?
2. What are the visitors' perceptions of knowledge gains, how interesting the content is, usefulness, attractiveness, and ease of use of the website, and to what extent do visitors report reconsidering former attitudes, deciding to make changes, and that the site met their needs?
3. Are there statistically significant differences in visitors' reports of knowledge gains, how interesting the content is, usefulness, attractiveness, ease of use of the website, reconsidering former attitudes, deciding to make changes, and that the site met their needs, by various characteristics of visitors, including gender, education level, marital status, parental status, religion, and ethnic group?
4. Overall, how do website visitors feel about the website, and in what ways should the website be improved, as indicated by open-ended responses?

III. METHOD

Procedures and Measures

Website Utilization

Website utilization was assessed using Web-based software called SuperStats (see <http://www.superstats.com>). SuperStats functions by gathering publicly available information about Internet users and their habits. When the developers initiated service with SuperStats, they were given a personalized bit of code to place within each page of the *Forever Families* website. When the website was accessed by an Internet user, SuperStats made note of the visit and retrieved information such as what country the visitor was accessing the site from, and began tracking the visitor. To prevent data corruption, the computers of researchers and Web developers working on *Forever Families* were blocked from being tracked by SuperStats. The three specific forms of data collected by SuperStats which are most relevant to this study are number of unique visitors, return visitors, and page views. These are discussed below.

Number of unique visitors. A unique visitor is a computer (presumably a single person) who is visiting the site but has never visited before. Unique visitors are tracked by day, month, or year. A person who visits a website two or more times in one day is only tracked once in the daily unique visitor category. Likewise, a person who visits many times in a month will only be counted once a month under the monthly unique visitor measure. For this study, the researcher was interested in the number of unique visitors during August and September of 2002.

Number of return visitors. The number of return visits to a site reflects the number of visitors to the website who have viewed it before. The number of return visits is presumed to inform a researcher about visitors' interest in and loyalty to a website.

Number of page views. Every time a person visits a new page on a website, it is counted as an additional page view. Thus, every visitor to a website performs at least one page view in a visit, but, for example, if a person accesses 10 Web pages at a website, that visitor is counted as having performed 10 page views.

Some question whether or not tracking website visitors using Web-based software is ethical. SuperStats is not able to retrieve any "personal" information about an Internet user such as the user's name or email address, but the information it does provide is very useful, and many businesses use the SuperStats system to gather large volumes of statistics for use in improving the usability and marketing appeal of their websites. Using SuperStats to track website utilization can be compared to a family life educator counting the number of people who come to a FLE workshop and recording some of their apparent features (i.e., gender). Collecting this data is non-intrusive.

Ratings of the Website

In addition to using Web-based software, an online survey was a pragmatic choice for the evaluation of the *Forever Families* website. Online surveys simplify the process of research, allowing researchers to naturalistically reach a worldwide audience for a reasonable cost (Gay & Bennington, 1999, p. 13).

Every individual who visited the *Forever Families* website received an informed consent pop-behind box (see Appendix A) so that when the visitor finished exploring the

website and closed the browser, s/he received an invitation to participate in the study. This exit survey method was also recommended by Grant and colleagues (2001) as an alternative to the method they used. Care was taken to create the pop-behind box in such a way that it was not mistaken as an external advertisement but was obviously affiliated with the *Forever Families* website, in order to decrease perceptions of intrusiveness and allow participants to feel safe providing personal information about themselves (Cho & LaRose, 1999; Gaddis, 1998; Witte, Amoroso, & Howard, 2000, p. 185). This was done by including the *Forever Families* title at the top, using the same color and design scheme as the website, providing contact information, and keeping the webpage free of commercial advertisements.

The survey was developed by two researchers, including the current author. Survey development was guided by Hughes' (1999) conceptual guidelines for website evaluation (content, delivery, and usability), integrated with three levels of Bennett's impact assessment hierarchy (Bennett & Rockwell, 1995) appropriate for formative evaluation, as described below. Admittedly, in formatively evaluating the site, the researcher desired to assess impact, however minimally. Thus, a few items that could be considered summative were used in order to assess the value of the website and justify continued funding.

1. Characteristics of participants. Demographic survey items assessed characteristics of participants including place of residence, gender, age, ethnicity, religion, education level, marital and parental statuses, and income level (see Appendix B).

2. Participant reactions. Participant reactions to the website were assessed through various quantitative and open-ended response items on the online survey.

Respondents were asked to rate on a five-point scale (1=strongly disagree, 5=very strongly agree) their agreement with the following items: The *Forever Families* website is attractive, the content is interesting, the website is easy to use, and the website met my needs. In addition, they were asked to rate the usefulness of the website on a four-point scale ranging from 1 (very useful) to 4 (not useful at all). Furthermore, participant reactions were assessed through the following open-ended response items: (1) What improvements would you recommend to the website to make it more useful? and (2) Do you plan on visiting the website again? Why or why not?

3. KASA change. Changes produced in knowledge, attitudes, skills, and aspirations were assessed through participant ratings of agreement with the following items: The website led me to reconsider former attitudes, because of this website I've decided to do some thing(s) differently, and this website made me aware of things I didn't know before. In addition, participants were asked, "Do you plan to use any of the information you have learned from the website?" with an area allowing them to expound on their plans if they responded yes.

A final item, "Please give us any additional comments about the website" sought responses relevant to both KASA change and participant reactions. A committee of FLE experts, some who have Web expertise, gave feedback on the survey before it was administered online. Suggestions led to refinements in the wording of items.

The default answer for all quantitative items was a non-response, thus preventing error that may have biased participant responses (Gaddis, 1998). For example, for the item “What is your religious affiliation,” the default answer was “Please select one” rather than the first listed religion, “Buddhist.”

After participants completed the survey they clicked the submit button, which automatically sent the information by way of an email to the researcher. After submitting the survey, the participants were sent to a conclusion page thanking them for their feedback, as is good practice (Gaddis, 1998).

Participants

SuperStats Participants

From August 2002, the visit of every computer to the *Forever Families* website, as well as the overall activity on the website, was tracked by SuperStats. In a sense, through using this technology, every visitor to the website was indirectly a participant of this study (however, “participant” as used below refers to those who filled out an online survey, not those tracked by SuperStats, unless otherwise indicated). Using reports from SuperStats, the estimated number of unique visitors to the website during the months of August and September 2002 is about 24,250. Exact counts are only available for a one day, one month, or one year period, thus a two month report is only an estimate. These users accessed the website from Argentina, Australia, Austria, Belgium, Botswana, Brazil, Canada, Colombia, Denmark, the Dominican Republic, France, Germany, Greenland, Indonesia, Italy, Japan, Mexico, the Netherlands, New Zealand, Norway, Portugal, Russia, Samoa, Singapore, South Africa, Spain, Sweden, Switzerland, the

United Kingdom, the United States, Uruguay, Venezuela, and Zambia. According to online survey results, the website was visited by others residing in countries not detected by SuperStats including Belize, Chile, Ecuador, Hong Kong, Peru, the Philippines, Puerto Rico, Romania, and Tanzania.

Online Survey Participants

After visitors read the informed consent pop-behind box described above, they could give consent by clicking “continue,” at which point they were taken to the *Forever Families* survey. Several actions were taken, in addition to inviting every website visitor to participate in the study (see Gay & Bennington, 1999; Jones & Simons, 1999, p. 7; Teo, 2001, p. 134) and creating a non-intrusive informed consent letter, to maximize the response rate and thus allow for a more representative sample. These included making the survey brief and to the point; using drop-down menus to avoid making the survey look overwhelmingly lengthy; placing demographic items at the end of the survey, as is good practice with online surveys so as to avoid early attrition; and widely publicizing the website through newspaper and magazine articles and links from various websites including www.byu.edu, www.familyfriendlysites.com, www.lds.org, www.smartmarriages.com, www.stepfam.org, etc. (see Kaye & Johnson, 1999). In addition, the survey instructions were clearly stated, the survey loaded quickly, the survey was intuitive, and it was easy to submit (see Kaye & Johnson).

Despite the absence of a monetary incentive, of the about 24,250 unique visitors to the website during the months of August and September 2002, 917 individuals from 27 different countries and from 46 out of the 50 United States submitted surveys. The mean

age of the participants was 41.6 years ($SD = 14.04$), with a range from 16 to 99 (note: the researcher at first assumed that there was not actually a 99-year-old participant. But when open-ended responses were examined, it was clear that he was, in fact, 99 years of age). Of the participants, 90.9% were White, 76.9% were parents (the mean age of the children was 2.7, $SD = 2.03$, with a range of 0 to 11 children), 88.1% were married, 58% were female, and 95.5% were members of The Church of Jesus Christ of Latter-day Saints (hereafter, Latter-day Saints or LDS). The sample was highly educated with 47.3% having a bachelor's degree or more, 44.6% having attended some college or received an associate's degree, and only 8% having a high school diploma or less. In addition, more than half of the participants had a gross annual family income of \$50,000 or more. See Table 1 for a complete demographic summary. Excepting the high number of Latter-day Saints and females, the sample appears to be demographically similar to the Internet population as a whole.

Table 1
Demographic Characteristics of Study Participants (N = 917)

Variable	<i>n</i>	%
Gender		
Female	517	57.6
Male	380	42.4
Education		
Less than high school	6	0.7
High school equivalency (GED)	11	1.2
High school	55	6.1
Some college, not enrolled	221	24.7
Some college, enrolled	87	9.7
Associate's degree	92	10.3
Bachelor's degree	202	22.0
Graduate/prof. degree, not completed	59	6.6
Graduate/prof. degree, completed	163	18.2

Marital Status		
Single, never married	92	10.2
Married, first marriage	624	69.3
Remarried	118	13.1
Divorced	51	5.7
Widowed	15	1.7
Parental Status		
No children	212	23.1
Children	705	76.9
Number of Children		
<i>M</i>		2.65
<i>SD</i>		2.03
Range		0–11
Religion		
Latter-day Saint	855	95.5
Protestant	7	0.8
Catholic	5	0.6
Jewish	4	0.4
Other	14	1.6
None	10	1.1
Race		
White	814	90.9
Black, non-Hispanic	2	0.2
American Indian/Alaskan Native	10	1.1
Asian	17	1.9
Hispanic	20	2.2
Pacific Islander	6	0.7
Multiracial/Other	26	2.9
Age (years)		
<i>M</i>		41.58
<i>SD</i>		14.04
Range		16–99
Family income		
Less than \$5,000	12	1.5
\$5,000-14,999	42	5.1
\$15,000-24,999	63	7.6
\$25,000-29,999	67	8.1
\$30,000-39,000	84	10.2
\$40,000-49,999	129	15.7
\$50,000-74,999	182	22.1
\$75,000-100,000	130	15.8
More than \$100,000	115	14.0

*Note: Percentages may not equal 100 percent due to rounding.

Analyses

The first research question, “To what extent has the *Forever Families* website been utilized—specifically, how many unique visitors, return visits, and page views have there been?” was addressed by basic frequency reports compiled by SuperStats. The second research question, “What are the visitors' perceptions of knowledge gains, how interesting the content is, usefulness, attractiveness, and ease of use of the website, and to what extent do visitors report reconsidering former attitudes, deciding to make changes, and that the site met their needs?” was addressed through the use of frequencies and descriptive statistics.

The third research question, “Are there statistically significant differences in visitors' reports of knowledge gains, how interesting the content is, usefulness, attractiveness, ease of use of the website, reconsidering former attitudes, deciding to make changes, and that the site met their needs, by various characteristics of visitors, including gender, education level, marital status, parental status, religion, and ethnic group?” was addressed through the use of multivariate analysis of variance (MANOVA). Scheffé post hoc comparisons were conducted when significant differences were found in MANOVA analyses for independent variables with more than two levels. An alpha level of .05 was used for all statistical tests.

The fourth research question, “Overall, how do website visitors feel about the website, and in what ways should the website be improved, as indicated by open-ended responses?” was addressed using a variation on the methods described by Strauss and Corbin (1990, 1994), Patton (1987, 2002), and Bogdan and Bilken (1992). First, three

researchers, including the current author, independently read open-ended responses to gain a general understanding of the data. Secondly, each researcher conducted open coding (Strauss & Corbin, 1990). Independently, researchers categorized (and subcategorized) the responses, without predetermined categories (Patton, 1987). During this process, comments were not restricted by the question being responded to, but were coded based on the content of the comment. One comment could fit within multiple categories.

Initially, the researchers independently analyzed only two of the open-ended questions, then met together to compare and discuss the results. After coming to an understanding of the similarities and differences among our coding, and discussing the strengths and weaknesses of each approach, the researchers revised the categorization system to be more representative of the data, as interpreted by the three researchers. This same process was repeated for the next two questions, and then the final two questions. After themes were decided upon for all six open-ended questions, researchers met together and came to a consensus on the final themes to be used.

IV. RESULTS

Website Utilization

As can be seen in Table 2, SuperStats data compilations reveal that during August there were 21,910 unique visitors and in September there were 4,123. It can be estimated that there were about 24,250 unique visitors during the two months. During August and September, there were a total of 5,837 return visitors. The specific day-by-day breakdown of return visitors can be seen in Table 3. The return visitor reports reveal that approximately 24% of the unique visitors were repeat users (although some visitors may be counted multiple times).

In addition, SuperStats calculated 77,433 page views on the website in August and 14,752 during September, totaling 92,185 for the two months. Thus, each unique visitor viewed an average of about four pages—a relatively small number.

Table 2
Website Traffic Frequencies

Traffic	Frequency
Unique Visitors	
August 2002	21,910
September 2002	4,123
Estimated Total	24,250
Return Visits	
August 2002	3,838
September 2002	1,999
Total	5,837
Page Views	
August 2002	77,433
September 2002	14,752
Total	92,185

Table 3

Return Visitors (Compiled by SuperStats)

Date	Return Visitors	Date	Return Visitors
Aug 01, 2002	15	Sep 01, 2002	76
Aug 02, 2002	20	Sep 02, 2002	95
Aug 03, 2002	5	Sep 03, 2002	99
Aug 04, 2002	0	Sep 04, 2002	79
Aug 05, 2002	10	Sep 05, 2002	67
Aug 06, 2002	9	Sep 06, 2002	71
Aug 07, 2002	7	Sep 07, 2002	45
Aug 08, 2002	8	Sep 08, 2002	68
Aug 09, 2002	10	Sep 09, 2002	109
Aug 10, 2002	1	Sep 10, 2002	88
Aug 11, 2002	2	Sep 11, 2002	94
Aug 12, 2002	79	Sep 12, 2002	58
Aug 13, 2002	260	Sep 13, 2002	47
Aug 14, 2002	523	Sep 14, 2002	38
Aug 15, 2002	339	Sep 15, 2002	63
Aug 16, 2002	209	Sep 16, 2002	83
Aug 17, 2002	166	Sep 17, 2002	78
Aug 18, 2002	213	Sep 18, 2002	62
Aug 19, 2002	234	Sep 19, 2002	80
Aug 20, 2002	185	Sep 20, 2002	67
Aug 21, 2002	224	Sep 21, 2002	59
Aug 22, 2002	197	Sep 22, 2002	71
Aug 23, 2002	157	Sep 23, 2002	65
Aug 24, 2002	121	Sep 24, 2002	49
Aug 25, 2002	157	Sep 25, 2002	47
Aug 26, 2002	177	Sep 26, 2002	49
Aug 27, 2002	165	Sep 27, 2002	62
Aug 28, 2002	128	Sep 28, 2002	26
Aug 29, 2002	133	Sep 29, 2002	60
Aug 30, 2002	84	Sep 30, 2002	44
Aug 31, 2002	43		
August Total:	3,838	September Total:	1,999

Participant Ratings of the Website

Just fewer than 4% (917) of the unique visitors chose to complete the evaluation survey. Such a response rate for a summative evaluation would generate data inadequate for meaningful analysis. But for the formative purposes, the feedback can be used to improve the value of the content and format of the website.

As can be seen in Table 4, participants generally rated the website quite positively. The dependent variable rated the highest by participants was how interesting the website's content was. Ninety-seven percent of participants agreed or strongly agreed that the website's content was interesting. Only 2% indicated they were neutral and 1% disagreed or strongly disagreed ($M = 4.56$, $SD = 0.57$). Sixty-six percent of the participants rated the website as very useful, twenty-nine percent as useful, five percent as somewhat useful, and only three participants (0.3%), rated the website as not useful at all ($M = 3.61$, $SD = 0.59$). Eighty-two percent of the participants agreed or strongly agreed that the website met their needs, fifteen percent were neutral, and three percent disagreed or strongly disagreed ($M = 4.11$, $SD = 0.79$).

Ninety-three percent of the participants agreed or strongly agreed that the *Forever Families* website was attractive, six percent were neutral and 0.5% disagreed or strongly disagreed ($M = 4.41$, $SD = 0.63$). Ninety-three percent of the participants agreed or strongly agreed that the website was easy to use, six percent were neutral, 0.1% disagreed, and no participant strongly disagreed ($M = 4.47$, $SD = 0.65$).

Most participants (63%) agreed or strongly agreed that the website made them aware of new things. Thirty-one percent were neutral and six percent disagreed or strongly disagreed ($M = 3.78$, $SD = 0.87$). Fifty-eight percent of the participants agreed or

Table 4
Participant Ratings of the Forever Families Website

Perceptions	<i>n</i>	%	<i>M</i>	<i>SD</i>
The content is interesting			4.56	0.57
Strongly disagree (score = 1)	1	0.1		
Disagree	4	0.4		
Neutral	19	2.1		
Agree	343	37.6		
Strongly agree (score = 5)	545	59.8		
How useful is the website			3.61	0.59
Not useful at all (score = 1)	3	0.3		
Somewhat useful	42	4.7		
Useful	261	29.0		
Very useful (score = 4)	594	66.0		
The site met my needs			4.11	0.79
Strongly disagree	5	0.6		
Disagree	23	2.6		
Neutral	136	15.3		
Agree	434	48.7		
Strongly agree	293	32.9		
The website is attractive			4.41	0.63
Strongly disagree	1	0.1		
Disagree	4	0.4		
Neutral	55	6.1		
Agree	413	45.4		
Strongly agree	436	48.0		
The site is easy to use			4.47	0.65
Strongly disagree	0	0		
Disagree	9	0.1		
Neutral	52	5.7		
Agree	354	39.0		
Strongly agree	493	54.3		

The site has made me aware of new things			3.78	0.87
Strongly disagree	6	0.7		
Disagree	48	5.4		
Neutral	276	30.8		
Agree	369	41.2		
Strongly agree	196	21.9		
The site let me to reconsider former attitudes			3.73	0.92
Strongly disagree	12	1.3		
Disagree	44	4.9		
Neutral	325	36.3		
Agree	303	33.9		
Strongly agree	211	23.6		
I've decided to do something differently			3.84	0.87
Strongly disagree	9	1		
Disagree	37	4.1		
Neutral	255	28.5		
Agree	378	42.2		
Strongly agree	217	24.2		
*Note: Percentages may not equal 100 percent due to rounding.				

strongly agreed that the website had led them to reconsider former attitudes. Thirty-six percent were neutral and six percent disagreed or strongly disagreed ($M = 3.73$, $SD = 0.92$). Sixty-six percent of the participants agreed or strongly agreed that because of the website they decided to make changes in their lives. Twenty-nine percent were neutral and four percent disagreed or strongly disagreed ($M = 3.84$, $SD = 0.87$).

Participant Ratings by Demographic Characteristics

A 2x2x2x2x2x3 MANOVA was performed on 8 dependent variables: reports of website attractiveness, content interest level, ease of use, usefulness, reconsidering attitudes, doing things differently, being made aware of new things, and the site meeting their needs. The independent variables included the following: gender (female, male), marital status (single, married), parental status (parent, non-parent), religion (LDS, other

faith), ethnic group (White, non-White), and education level (less than high school through high school diploma, some college through associate's degree, bachelor's degree through graduate or professional degree). With the use of Wilks' criterion, the combined dependent variables were significantly affected by both ethnicity $F(8, 805) = 3.33, p < .001$ and education level $F(16, 1,610) = 1.82, p < .025$.

Upon examining the effects of ethnicity and education level on each of the dependent variables, it was found that ethnicity significantly affected only one dependent variable, "the site led me to reconsider former attitudes," with non-Whites being more likely to say the site led them to reconsider former attitudes than Whites ($M_{\text{White}} = 3.72$; $M_{\text{non-White}} = 3.96$), $F(1, 812) = 8.68, p < .003$. Education level significantly influenced the dependent variables, "the site led me to reconsider former attitudes" $F(2, 812) = 11.15, p < .001$, and "I've decided to do some things differently" $F(2, 812) = 6.74, p < .001$.

Scheffé Post hoc comparisons for education level revealed significant differences between those with a bachelor's degree or more education and those with a high school diploma or less ($p < .002$). There were also significant differences between those with a bachelor's degree or more and those with some college through an associate's degree ($p < .001$). Those with a bachelor's degree or more were less likely to report the website had led them to reconsider former attitudes than those with less education ($M_{\text{HS or less}} = 3.97, SD = 0.94$; $M_{\text{some college to Associate's}} = 3.85, SD = 0.90$; $M_{\text{Bachelor's or more}} = 3.58, SD = 0.91$). When looking at the dependent variable, "I've decided to do some things differently," again, there were significant differences between those with a bachelor's degree or more and those with a high school diploma or less ($p < .008$), and significant differences

between those with a bachelor's degree or more and those with some college through an associate's degree ($p < .001$). Participants with a bachelor's degree or more were less likely to report the website had led them to decide to do some things differently than participants with less education ($M_{\text{HS or less}} = 4.06$, $SD = 0.81$; $M_{\text{some college to Associate's}} = 3.94$, $SD = 0.88$; $M_{\text{Bachelor's or more}} = 3.72$, $SD = 0.86$).

As seen in Table 5, other independent variables were significantly associated with several of the dependant variables at the univariate level of analysis, but cannot be interpreted as significant, as these associations were not strong enough to appear at the multivariate level of analysis.

Table 5

MANOVA: Relationships between Independent and Dependent Variables

IVs	DVs	Multivariate Analyses			Univariate Analyses		
		<i>df</i>	<i>F</i>	<i>p</i>	<i>df</i>	<i>F</i>	<i>p</i>
Gender		8, 805	1.48	.161			
	Website attractiveness				1, 812	3.29	.070
	The content is interesting				1, 812	3.62	.057
	Site is easy to use				1, 812	8.98	.003
	Led me to reconsider former attitudes				1, 812	2.35	.126
	I've decided to do something differently				1, 812	4.65	.031
	Site has made me aware of new things				1, 812	1.97	.160
	Site met my needs				1, 812	1.90	.169
	Website usefulness				1, 812	3.35	.068

Religion	8, 805	0.97	.460			
Website attractiveness				1, 812	2.17	.142
The content is interesting				1, 812	0.43	.510
Site is easy to use				1, 812	2.17	.141
Led me to reconsider former attitudes				1, 812	0.15	.704
I've decided to do something differently				1, 812	1.91	.167
Site has made me aware of new things				1, 812	0.80	.373
Site met my needs				1, 812	2.50	.115
Website usefulness				1, 812	3.06	.080
Parental Status	8, 805	1.61	.118			
Website attractiveness				1, 812	0.55	.457
The content is interesting				1, 812	2.56	.110
Site is easy to use				1, 812	0.05	.827
Led me to reconsider former attitudes				1, 812	0.20	.857
I've decided to do something differently				1, 812	0.55	.459
Site has made me aware of new things				1, 812	7.00	.008
Site met my needs				1, 812	1.09	.297
Website usefulness				1, 812	0.01	.918
Marital Status	8, 805	1.27	.256			
Website attractiveness				1, 812	1.96	.162
The content is interesting				1, 812	3.73	.054
Site is easy to use				1, 812	0.16	.688
Led me to reconsider former attitudes				1, 812	0.96	.327

	I've decided to do something differently					1,812	5.35	.021		
	Site has made me aware of new things					1,812	4.06	.044		
	Site met my needs					1,812	1.94	.164		
	Website usefulness					1,812	1.55	.213		
Ethnicity		8,805	3.33	.001						
	Website attractiveness					1,812	0.45	.501		
	The content is interesting					1,812	1.99	.158		
	Site is easy to use					1,812	1.36	.245		
	Led me to reconsider former attitudes					1,812	8.68	.003		
	I've decided to do something differently					1,812	1.09	.297		
	Site has made me aware of new things					1,812	1.71	.191		
	Site met my needs					1,812	3.27	.071		
	Website usefulness					1,812	0.51	.477		
Education		16, 1,610	1.82	.025						
	Website attractiveness					2,812	0.29	.747		
	The content is interesting					2,812	0.36	.700		
	Site is easy to use					2,812	0.98	.376		
	Led me to reconsider former attitudes					2,812	11.2	<.001		
	I've decided to do something differently					2,812	6.74	.001		
	Site has made me aware of new things					2,812	2.86	.058		
	Site met my needs					2,812	0.80	.451		
	Website usefulness					2,812	2.54	.079		

Open-ended Responses

A total of 677, or nearly three-quarters of the participants responded to at least one open-ended question on the survey. Analysis of open-ended responses resulted in nine themes and multiple subthemes (in parentheses): website appearance (attractive, suggested improvements), website organization (well-organized, suggested improvements), website functionality (strengths, weaknesses), website features (positive comments, suggested additions), website content (strengths, weaknesses, suggested additions), overall website (positive comments, suggestions for improvement), plans for use (personal application, share with others), reasons for not planning to return to the website, and comments about the survey. The last theme is not relevant to participants' ratings about the website, so comments falling within this theme will not be discussed further. Each theme and subtheme is discussed below.

Website Appearance

The website is attractive. Most study participants who mentioned the website appearance in their open-ended responses expressed they felt the website was attractive. For instance, when asked what they like best about the website, one participant said "It's an attractive site, very clean and inviting." Another said, "I love the . . . look. It is very attractive." Other participants said the website has a "very good visual theme," and "I like that it is simple and not flashy."

Suggested improvements to website appearance. Others were not as pleased with the website's appearance. A few participants commented that the appearance was bland and uninviting. Some suggested making the website more colorful, and many suggested

adding more photos and graphics to improve the appearance. Others suggested removing one particular photo from the website.

Website Organization

The website is well-organized. Several participants commented that they liked how the website was organized. When asked what they liked about the website, one participant said, “The organization is great.” Another said the “material is well organized and easy to follow.”

Suggested improvements to website organization. Some participants thought the website’s organization needed improvements. One participant mentioned that the subcategory system in one category was not easy to understand. Another described her struggles with the organization of the website: “Once I clicked on to a ‘Category’ and it gave the alphabetical listings, then it was not easy to remember which ‘Category’ I had clicked on to. . . when I was ready to return HOME and move to the next ‘Category.’” A few other participants recommended organizing the website by a different set of categories, or making them less “cumbersome and difficult to maneuver through.”

Website Functionality

Functionality strengths. Many participants said what they liked best about the website was that it was “easy to use” or “user friendly.” One participant said, “The website fills a need to have the information available in [an easily] accessible format for easy use.” Other functionality strengths mentioned were fast loading and the option to show or hide the article written specifically for Latter-day Saints. A small number of participants said they liked the pop-up windows.

Functionality weaknesses. Participants had various complaints about the functionality of the website. Many participants expressed that the pop-up windows were not very functional, mostly because they did not allow for the window to be maximized. One participant mentioned not liking that external Web links opened in the same window. Another participant recommended that a link to the homepage be provided from other pages within the site.

Others experienced technical problems. For instance, some mentioned that the website loaded slowly, the site did not work well in Netscape, some links were broken, and it was difficult to print from the site.

Website Features

Positive comments. One participant mentioned liking the availability of a site map. Others liked the featured article available on the homepage and the additional readings available at the end of some articles.

Features that need to be added. Participants suggested the addition of many features, including the ability to print charts from the website, regular newsletters or email updates, more activities and exercises, an option to save articles, archives to previous articles, references in abbreviated articles (at the time there were only references in the expanded articles), multimedia features, links to references from articles, and the option to access the website in other languages (participants specifically requested Spanish and Portuguese). Several participants also requested interactive features on the website such as a discussion board and a Q&A section where visitors could have their

questions answered by “experts.” Many participants expressed interest in having an “email this article to a friend” feature and the option to format articles for printing.

Website Content

Content strengths. Participant comments on content were overwhelmingly positive. Numerous participants said what they liked best about the website was the content. Participants listed many content strengths including that the content was useful (for self and others), well-written, easy to read or understand, not too long, not preachy, positive and inspirational, supportive of good values, non-denominational, Proclamation-based, based on the family, a reminder of beliefs, encouraging, empowering, realistic, single-parent friendly, and that it included a good variety of information and discussed a good amount of research. The following comment sums up what seemed to be the feeling of many:

I really appreciate the number of hands-on suggestions that are given to help families. Sometimes you know that there is a problem and are just not sure as to how to address them. . . . This website has so many wonderful resources to help marriages and families!

Participants mentioned many specific articles and topics that they liked.

Content weaknesses. Some participants also listed content weaknesses including the website was too simplistic, was not simple enough, contained research mostly from the U.S., was too academic, was not useful or applicable, contained typos, was not direct or aggressive enough, did not have enough feeling or “Spirit,” and was a repeat of what participants already knew. Participants recommended removing certain links or

references from the site. Also, several people listed things the website needs more of, including more detail, humor, research, practical information, and religiosity. Also, some LDS participants suggested that the website needs to be more useful for those who are not LDS, a sentiment not communicated by those participants who were not LDS; others said it needs to be more useful for those who are LDS (i.e., less “worldly”).

Suggested additions. Many participants said they wanted more articles available at the website, many mentioning specific topics they would like to be addressed (some of which are addressed on the website but were overlooked by the participants). These included articles addressing the needs of single adults, single parents, staying married, being a stay-at-home parent, strong families, childless couples, repairing damaged relationships, children with special needs, avoiding contention, depression, stepfamilies, deviant children, sexuality in marriage, parenting teenagers, marriage in the later years, and articles in the two categories that did not yet have articles (Divine Nature and Destiny and Sanctity of Life).

Overall Website

Many comments addressed the website as a whole, and not the functionality, content, or features. These comments were categorized in the “overall website” theme.

Positive comments. Several expressed the sentiment that what they liked best about the website was that “it exists.” Some of the positive comments in this category included that the website is a great site, good for all, comfortable, encouraging, a “one-stop shop,” a good reminder, an answer to prayer, a good resource, needed, timely, easy to apply to all faiths, valuable, practical, etc. Others said to keep the site up, that they

wish they had known about the website before, and they wanted to read and learn more. Some indicated they had set the *Forever Families* website as their home site or added it to their “favorites.”

Suggestions for website improvement. Participants recommended making the objectives of the website clear (i.e., through a mission statement), making it more widely available (through advertising), and making an effort to better entice the readers. Others suggested making the website less commercial (they did not like the links to books that could be bought or services requiring payment, or the link to donation opportunities), making the website less academic, and increasing the font size in certain areas.

Plans for Use

Personal application. Of those who indicated plans to use the website (95%), many said they will use ideas for personal improvement or to strengthen their family, without explaining how. Some specified that they will use the ideas to prepare for marriage, or to strengthen their marriage, parenting, and/or grandparenting. Others said that the information will help them in future relationships (i.e., when they are married). Many indicated that the information led them to set goals, and many said they planned to use the website as a reference or resource. Multiple participants mentioned specific concepts or articles they plan to apply in their lives.

Share with others. Many individuals did not discuss plans for personally applying what they learned at the website but mentioned that they would share the information with friends or family members. Others said they would recommend the website to

friends or family. Still others said they would use the information in teaching their families or to help them in their responsibilities as a therapist or minister.

Reasons for Not Planning to Return to the Website

Only 13 out of the 917 participants indicated that they did not plan to visit the *Forever Families* website again. Of those who did not plan to return, there were four main explanations—the website was of little benefit, the website was not applicable, the website required too much reading, and the website was too academic.

Overall, the responses to open-ended items by 677 of the participants revealed a great appreciation for the *Forever Families* website. The participants also provided numerous helpful suggestions for website improvement.

V. DISCUSSION

Summary and Discussion of Findings

Website developers and the researcher were surprised but quite pleased that the *Forever Families* website was accessed by such a large number of people and that so many of them returned to the site. The number of reported monthly visitors for most other FLE websites does not approach the number of visitors to the *Forever Families* website received during August and September of 2002 (see Grant et al., 2001; Hughes, 2001; Morris et al., 1999). The high rate of return visitors suggests the website was well received and there is some loyalty to the site. The overall high rate of utilization suggests a great need for FLE information, and warrants future investment in and evaluation of the website.

The developers and researcher were disappointed that visitors viewed so few pages (four) on average. This suggests the need for an effort to make the site more interesting and inviting so that visitors will want to view more articles. However, only briefly perusing websites on initial visits may be normative behavior for many Web users. Or, this finding may just be a reflection of the busy lives of many of the website visitors.

Results of this study revealed that participants' reactions to the website were overwhelmingly positive; the participants responded affirmatively that the website met their needs and was useful, attractive, interesting, and easy to use. In addition, participants reported changes in knowledge, attitudes, skills, and aspirations, suggesting

that a FLE website can have enough of an impact to warrant further assessment of short- and long-term outcomes.

It was not surprising that visitors ranked the interest level of the content the highest, given visitors' responses to open-ended items. This finding suggests that the website filled a need for content and was interesting to the participants. Whether or not the site led visitors to reconsider former attitudes was ranked the lowest, although still a mean of 3.7 on a scale of 5. This finding is understandable, considering that attitudinal changes are difficult to bring about. Another plausible explanation for this finding is that many of the participants may have already had attitudes aligned with those expressed on the website, making attitude adjustment unnecessary; the articles simply reinforced what they already believed. Some of the open-ended responses suggest this explanation.

These findings suggest that Web-based FLE can have an impact on its visitors, which is a result supportive of the study by Grant and colleagues (2001). Beyond this, the current study found that visitor perceptions are associated with at least some visitor characteristics, namely education and ethnic background. Non-Whites were more likely than Whites to report that the website led them to reconsider their attitudes, and those with less education (an associate's degree or less) were more likely to report the website led them to reconsider their attitudes and decide to make changes in their lives.

Why would those with less education be more likely to report the website led them to reconsider their attitudes and decide to make changes? One possible explanation is that those with less education have more room to make improvements in their personal and family lives—they stand more to benefit from educational information. Those with

less education have likely been exposed to fewer family life education experiences, and thus, the *Forever Families* website had a greater impact on their attitudes and decisions to initiate change. Another explanation for this finding is that those with more education may be more cautious in giving out “very strongly agree” ratings, whereas those with less education are less discriminatory. In considering this finding, it is important to note that differences between means were quite small. Those with a bachelor’s degree or more, although less likely to give a “very strongly agree rating” still rated the website leading them to reconsider former attitudes and decide to make changes in their lives quite positively overall.

Why would non-Whites be more likely than Whites to report the website leading them to reconsider former attitudes? An explanation for this finding is quite similar to the finding regarding education level differences. It is plausible that many individuals from minority races face greater family-related risks, and consequently are in greater need of educational information. Thus, when they receive information, they may be more receptive to it, as indicated by a greater change in attitudes. However, this finding warrants caution for two reasons: 1) the difference between means is small, and 2) only 9% of the participants were non-Whites, thus the data may not accurately represent the views of non-Whites.

Regardless of the explanations for the findings, the fact that the website is, on some measures, rated more positively by non-Whites and those from lower education levels is encouraging. In the initial stages of website development, the website developers were concerned about the website meeting the needs of these two groups. Articles were

written to be accessible to those with less formal education. There is formative evidence that the site is benefiting a racially and educationally diverse audience.

There were no significant differences in reports of website perceptions between males and females, Latter-day Saints and those of other faiths, the married and the single, and parents and non-parents. This suggests that general family information on the Web can appeal to both men and women equally (at least when the user audience is overwhelmingly LDS). The finding that this FLE website appeals to men is especially noteworthy, considering the fact that men do not always feel comfortable seeking out traditional FLE (Grant et al., 2001). In addition, it was surprising that, despite parts of the website being specifically targeted at Latter-day Saints and the site being developed using *The Family: A Proclamation to the World* (The First Presidency and Council of the Twelve Apostles of The Church of Jesus Christ of Latter-day Saints, 1995) as a framework, the site generally appealed to those of all faiths. But because 95.5% of the participants were members of the LDS Church, the data may not accurately reflect the views of those of other faiths. A lack of significant differences in ratings of the website between the married and the single and the parents and the childless suggests that the website appeals to individuals from a wide range of family types, and that other broadly focused FLE sites can do likewise.

Implications for Needed Improvements to the *Forever Families* Website

Although the website was positively received, many changes would improve it. Visitors provided helpful suggestions for website improvements in various areas, including appearance, organization, functionality, features, and content.

Appearance

It was expected that some would not like the appearance of the website—it is very difficult for the look of a single website to appeal to every visitor's tastes. One participant did well at summing up the researcher's feeling, "The website is simple in appearance without overuse of graphics—as it should be for an information sharing website."

However, a second opinion will be sought from a professional designer on the overall appearance of the website. In addition, the disliked photo will be removed from the site as suggested.

Organization

Steps will be taken to make the website's organization more intuitive. At the time the site was evaluated, it was difficult for visitors to tell what content category they were in when viewing an article, and to proceed to the next article in the category after reading one. The researcher proposes programming the site such that when a visitor clicks on a category, that category will become emboldened in the list of categories and the list of articles for that category will appear under the category name when a visitor clicks on an article from the category. This will allow visitors to proceed with ease from one article in a content category to the next and from articles in one content category to the next. A Web developer will be consulted with to discuss these and other options for improving the website's organization.

Functionality

To improve the website's functionality, the oft complained about pop-up windows will be removed from the website and changed to regular pages within the site that allow

maximization. Also, a link to the homepage from all other pages will be provided, as suggested. Every effort will be taken by the developer to minimize technical difficulties from occurring in the future.

Features

Participants made requests for the addition of many features that would greatly enhance the website. The requested features that will soon be added include the following: the option to print articles, the option to print activity charts, the option to email an article to a friend, more activities and exercises, references in the main articles, and links from articles to Web-based references. Because of financial restraints, some requested features are not practical to be added at this time, but may be added in the future. These include regular newsletters or email updates, multimedia features, and the option to access the website in languages other than English. Other requested interactive features such as a discussion board and a Q&A section will probably not be added. If a discussion board were made available, it would have to be monitored to prevent problems such as vulgar chatting among individuals who happen upon the site. Monitoring the discussion board would take a great deal of time, and thus money, as would maintaining a Q&A section. In addition, there could be legal ramifications to providing answers to individuals' questions. Answers to questions pertaining to family relations and human development are often unique to individual circumstances and the answers that would be provided may not fit the needs in every case, and thus, may not be well received.

Content

Many of the comments about the website's content were simply a matter of preference, with some participants complaining about elements that others praised. One frequent request was making more content available on the website; articles will continue to be added to the website regularly. Participants gave a lot of specific requests for article topics that will be addressed. Also, efforts are constantly being made to improve the quality of the articles on the website through an extensive proofreading and editorial process.

In addition to the findings that are applicable only to the *Forever Families* website, there are multiple findings with general implications, as discussed below.

Practical Implications for Web-based FLE

The fact that approximately 24,250 individuals from around the world visited the *Forever Families* website within a two-month period, and approximately one fourth of them returned to the site, suggests that there are many who are eager to find family life education information with a faith-based orientation on the Web. The study provides formative evidence that Web-based FLE information can build visitors' knowledge, motivate them to make changes in their lives, and lead them to reconsider their attitudes, thus strengthening marriages and families.

Although traditional FLE reaches a number of individuals who do not have Web access or may prefer human interaction, Web-based FLE is a valuable alternative or supplement to face to face education. The Web can provide information to those who do not seek out traditional FLE, either because they do not have the ability (because of time

limitations or the lack of a flexible schedule, a babysitter, or FLE classes available in their area), or the desire (because of inhibitions about social interaction or about admitting in public the need to learn about family issues). FLEs can create or use existing FLE websites to supplement their teaching or as professional resources. Of course, not all FLE websites are of equal value—the credibility of each must be considered.

Those developing FLE websites must take care to employ competent researchers and writers, and a skilled editor, in order to provide a reliable source, and a skilled Web developer and skilled Web designer, in order to ensure a functional, accessible, and attractive website. In addition, there is a need for constant improvement and additions to FLE websites, based on the expressed and anticipated needs of the target audience.

Study Limitations

A major limitation was the lack of a random sample and the poor number of visitors (less than 4%) who completed the survey. Inherent in a website evaluation using a convenience sample is the impossibility of ascertaining whether the data are representative. Thus, the findings may only be reflective of those visitors who elected to participate in the study. It would have been more helpful to have had a more ethnically, religiously, and educationally diverse sample, although in some respects the sample was similar to the overall population of Web users. Efforts were made through sending a press release to several states outside of Utah to gain a broader audience, but unfortunately, less than 5% of those who chose to participate in the study were not LDS. This does not necessarily indicate that few people of other faiths visited the site—perhaps those who

were LDS felt more inclined than others to offer feedback to help improve this BYU-sponsored site.

In addition, because this study was one of the first of its kind, there was not an existent survey with established reliability and validity properties to draw upon. The study was also limited in that it used single items to measure each construct. However, this study contributes to the understanding of what constructs will be important to measure more thoroughly in future studies. Future studies of website effects would benefit from using measures with established psychometric properties. In this case, such measures were not used because of the formative, exploratory nature of the study.

A related limitation involved shortcomings in the survey itself. For example, the technology was available to prevent visitors from, after indicating they lived in a country outside of the U.S., selecting a U.S. state. Unfortunately, this was not completed prior to the launch of the site, thus a few people indicated they were from a conflicting country and state (i.e., Spain and Utah). The place of residence for these participants was recorded as missing data. In addition, the survey prohibited some participants from reporting all their children in the age categories provided. Fortunately, a few participants compensated for this limitation by indicating the correct number of children as part of an open-ended response. In addition to having a team of experts review the survey, a pilot test conducted prior to initiating the study (Kaye & Johnson, 1999, p. 331) potentially would have eliminated these problems.

Technical difficulties come hand-in-hand with using technologies to facilitate research. For example, in this study, a few participants made it clear in their responses

that they had not yet viewed the *Forever Families* website, indicating that using a pop-behind feature was not always effective in recruiting participants *after* they had viewed the website. These participants' responses to content-related items were counted as missing data. Others clicked the "submit" button multiple times, thinking it had not worked the first time, so researchers received duplicate copies of their surveys. Duplicate surveys were easily identified by the researcher and deleted. Unfortunately, technical difficulties come with the territory, but technology professionals are always working to eliminate these types of problems.

Finally, multivariate analysis of variance, used in determining the relationship between independent and dependent variables, is quite conservative, and may have minimized what may have been significant differences. However, the researcher used MANOVA in order to protect against Type I error caused by conducting multiple statistical tests (i.e., conducting multiple one-way ANOVAs). Despite these limitations, the results of this study have provided helpful information about the impact of and needed improvements to the *Forever Families* website, and offer much to the understanding of Web-based FLE in general.

Research Implications and Future Directions

This study stands with very few educational website evaluations—nearly all of the hundreds of FLE websites available online lack published evaluations. Evaluation studies are needed to learn more about the effectiveness of FLE websites and their potential benefit. As others have reported (i.e., Grant et al., 2001; Hughes, 2001; Jenkins & Robin, 2002; Jones & Simons, 1999; Marton, 2000), the Internet can be a useful tool in

conducting these website evaluations. Studying websites naturalistically, while the website is fresh in the minds of the visitors, is vital to receiving reliable feedback. Also, conducting online website evaluations allows researchers to recruit study participants simply through recruiting visitors to the website, if the survey is readily available on the website. In this study, the researcher made the survey readily available through using a pop-behind box. Some other ideas for recruiting participants include making a link to a survey available from the homepage, or programming the site so a pop-up box containing the survey appears after a visitor has viewed a site for a given period of time (either in a single visit, or in all visits combined), or after a certain number of articles have been viewed. There is a need for innovative researchers to explore other possibilities.

Web research requires a great deal of familiarity with the Internet, and it is not recommended that one who is not Web-savvy direct a website evaluation. One who is not intimately familiar with the Internet may not know what questions to ask of Web visitors when evaluating a site. In addition, a lack of knowledge of Web technologies may restrict an evaluator from using the most effective evaluation methods. Finally, a non-Web-savvy evaluator may be prone to misinterpret or inappropriately take action based on participant responses.

A further important research implication, as also noted by Grant and colleagues (2001), is that combining quantitative and qualitative measures is beneficial in gaining a complete understanding of participants' perceptions of Web-based FLE. Quantitative items allow researchers to gather data about multiple constructs, and qualitative data help researchers to gain an in-depth understanding of the participants' overall feelings and

perceptions, and receive specific suggestions for improving a website. Including both quantitative and open-ended items proved to be beneficial in the evaluation of the *Forever Families* website and is recommended for other researchers.

Researchers should evaluate other FLE websites to determine if they are perceived similarly to *Forever Families*. Also, many questions remain unanswered. What are the stated needs of those who access FLE websites? It is known that hundreds of FLE sites are available, but how reputable in content are these sites? Do most provide reliable, research-based information? Do FLE websites have the potential to have a short and long-term impact on visitors? Also, how does the impact of Web-based FLE compare to the impact of traditional FLE? Is one method of delivery more beneficial for certain groups than others?

Using traditional research methods (as suggested by Grant et al., 2001) in combination with online surveying, comparing users of FLE websites with nonusers would be helpful. For example, a researcher could recruit participants and randomly assign half into an experimental group and half into a control group. A pretest could be given to both groups as a check on the similarity of the two groups, but such a procedure may sensitize both groups to FLE issues and become an unintended feature of the “treatment,” even for the control group. The experimental group would be asked to view the website being evaluated for a given number of hours within a specified amount of time. Then, both groups would complete a posttest and outcomes would be compared.

In a less stringent alternative study, a researcher could recruit two groups of individuals: one group made up of individuals who had previously accessed the website

being evaluated (requirements for participation could include an individual being a regular visitor for a given length of time, or an individual having visited the site at least a given number of times); the other group containing individuals with similar demographic characteristics who had not previously frequented FLE websites. If the two groups had been randomly chosen, both groups would be given posttests only and outcomes would be compared.

In addition, it would be beneficial to compare those who access one FLE website with those who use a different site and/or those who use traditional FLE. For a study comparing traditional and Web-based FLE, a researcher could recruit individuals and assign them to three separate groups: a control group, a FLE website group, and a traditional FLE group. Both the FLE groups would visit the research location for a given number of sessions (i.e., four), 1.5 to 2 hours long each. Those in the website group would be asked to read assigned articles on a particular FLE website during the time period, while those in the traditional group would participate in a workshop discussing the same information. Then, a posttest could be administered assessing knowledge gained, how enjoyable the experience was, plans to use the information, and so forth. Follow-up surveys could be administered to assess short- and long-term outcomes.

The field will benefit from future studies that evaluate FLE websites. The work of Internet-savvy, innovative researchers is much needed to further the literature on the needs of the FLE website audience and the educational value and impact of such sites.

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VII. Appendixes

Appendix A Informed Consent Pop-behind Box

Thank you for visiting ForeverFamilies.net!

We invite you to complete our on-line survey about *Forever Families*.

The purpose of the survey is to learn your impressions of the site, with an eye to making it better. This formative evaluation study is being conducted by Dr. Stephen Duncan, Professor in the School of Family Life at Brigham Young University. You were selected for participation in the study because you are one of many visitors to the website whose views on the site are very important to us.

Your participation in the study involves your taking 10 minutes to complete the simple survey that follows. It will ask you what you liked about the site as well as what you think we can improve. In addition, there are some background questions we would like you to answer so we can better understand for whom the site is most useful. After you complete the survey, click "submit."

There are minimal risks for participating in a study such as this. We believe you will benefit from helping us improve a website that is designed to help strengthen marriages and families worldwide.

Participation in the research is voluntary. However, all responses will remain anonymous; the information you provide to us will never be connected with your name.

If you have any questions regarding this research, you may contact Dr. Duncan at the School of Family Life, 350F SWKT, 801/422-1796. In addition, if you have any questions regarding your rights as a participant in a research project you may contact Dr. Shane Schulthies, Chair of the Institutional Review Board, at 801/422-5490.

If you are willing to complete the on-line survey, click here:

[Continue >>](#)

Close Window

Appendix B Online Survey

1. We would like to know your impressions of the *Forever Families* website. Please indicate how much you agree or disagree with the following statements:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The <i>Forever Families</i> website is attractive.	☐	☐	☐	☐	☐
The content is interesting.	☐	☐	☐	☐	☐
The website is easy to use.	☐	☐	☐	☐	☐
The website led me to reconsider former attitudes.	☐	☐	☐	☐	☐
Because of this website I've decided to do some thing(s) differently.	☐	☐	☐	☐	☐
This website made me aware of thing(s) I didn't know before.	☐	☐	☐	☐	☐
This website met my needs.	☐	☐	☐	☐	☐

Comments:

2.

	Very Useful	Useful	Somewhat Useful	Not Useful At All
How would you rate the usefulness of the <i>Forever Families</i> website?	☐	☐	☐	☐

3. What improvements would you recommend to the website to make it more useful?

4. Do you plan on visiting the website again?

yes

no

Why or why not?

5. What do you like best about the *Forever Families* website?

6. Do you plan to use any of the information you have learned from the website?

Yes

No

7. If yes, please tell us about your plans:

8. Please give us any additional comments about the website:

9. How frequently do you use the internet? (Select the best answer.)

Daily

More than once a week

Weekly

Less than once a week

Monthly

Less than once a month

Yearly

10. How frequently do you use the internet to learn about marriage or family issues? (Select the best answer.)

Daily

More than once a week

Weekly

Less than once a week

Monthly

Less than once a month

Yearly

11. How did you hear about this website?

A link from another website (Please Specify)

Search engine

Friend

News article

Magazine

Other (Please Specify)

12. Where do you live?

What country? (Select one)

If in the U.S., what state? (Select one)

13. How old are you?

14. What is your gender?

Male

Female

15. What is your religious affiliation? (Select one)

16. What is your race or ethnic group?

American Indian / Alaskan Native

Asian

Black, non-Hispanic

Hispanic

Pacific Islander

White, non-Hispanic

Multiracial

Other (please specify)

17. What is your marital status?

Single and never married

Married, first marriage

Remarried

Divorced

Widowed

Other

18. Please select the number of children you have in each category.

	0	1	2	3
0-2 years old	☐	☐	☐	☐
3-5 years old	☐	☐	☐	☐
6-12 years old	☐	☐	☐	☐
13-18 years old	☐	☐	☐	☐
18 or older	☐	☐	☐	☐

How many of these are stepchildren?

How many of these are adopted?

If no children, are you or your partner pregnant?

Yes

No

19. Is this your first time visiting the *Forever Families* website?

Yes

No

20. What is the total amount of time you estimate that you have spent at the *Forever Families* website, adding together all of your visits? (Also count time you have spent reading materials from the website that you printed or downloaded.) (Select the best answer.)

Less than 30 minutes

30 minutes to 1.5 hours

1.5 hours to 3 hours

3 hours to 5 hours

More than 5 hours

21. What is the highest level of education that you completed?

Less than high school

High school equivalency (GED)

High School Diploma

Some college, not currently enrolled

Some college, currently enrolled
Associate's degree
Bachelor's degree
Graduate or professional degree, not completed
Graduate or professional degree, completed

22. What is your family's gross yearly income before taxes and deductions?

Less than \$5,000
\$5,000 - \$14,999
\$15,000 - \$24,999
\$25,000 - \$29,999
\$30,000 - \$39,999
\$40,000 - \$49,999
\$50,000 - \$74,999
\$75,000 - \$100,000
More than \$100,000

23. Are you willing to have us contact you for further feedback on the website?

Yes

No

If yes, what is your email address?