Advanced Web-Based Training
for Adoptive Parents of Special Needs Children

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Phase I Final Progress Report
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A. General Scientific and Technological Aims

The aim of this project is to develop and evaluate a series of Web-based training classes for adoptive parents with special needs children. Adoptive families are rarely given the critical support they need to deal with difficult child behaviors once the adoption is completed. Adoptive families with special needs children differ from a foster family in significant ways: the family has a commitment to a forever bond; adopted children are aware of the loss of their birth parents and that reunification is not a possibility; the adoptive family assumes financial responsibility for the child; and as a new family member the child creates a permanent impact on the immediate family and on members of the family's supportive community. All of these changes have long-lived impacts, yet training and support services generally end once the adoption is finalized. Courts and laws require foster families to obtain in-service training, but nothing is required for the adoptive family after the adoption.

Adoptive families are Web savvy, and are interested and willing to use online courses to get convenient support and training. We propose developing a Web-based training series that targets special needs children in adoptive families. Our design takes full advantage of the instructional qualities of the Web, including interactive and audio-visual components, with a blended self-paced and group learning environment. Northwest Media (NWM) has used Web-based training extensively for in-service training with foster parents with considerable success through FosterParentCollege.com (FPC) (Pacifici, Delaney, White, Cummings, & Nelson, 2005).

In the last year, NWM has been developing a new approach to enhance online classroom training. Using our own funds, we worked towards building more of a virtual classroom experience where parents can learn about behavior problems and build an action plan to work with their child. Specifically, we added a 3-week guided and highly interactive discussion board. The board promoted interactions among class members who work together as a team on an ongoing case study. A classroom monitor or teaching assistant oversees the class training and posts activities twice a week. Parents are not required to be online all at the same time, but can enter the Web site 24/7 to post their input for the current lesson. In the first week, after viewing an introductory video segment online, parents listen to an audio voice story of, for example, a foster mother as she describes her son's lying problem and the trouble it has been causing. Class members then go to the discussion board to work on identifying and organizing the clues to and specifics of a behavior problem. The next week is spent brainstorming solutions and grasping the full case. In the final week, parents work together to build an action plan to solve the problem. In addition to the video segment and the guided discussion board, parents have access to a supplemental printable handouts section, and can use email to respond to specific issues. We also began to provide a classroom 'hallway' discussion board for parents to get to know each other and discuss items not directly related to the classroom discussion. We will use this prototype for the courses in the proposed training series.

In this proposal we want to further evolve this training format. This will include building a new multimedia video to model parenting approaches and skills; creating more formats for discussion board stories and exercises; and providing a private, password-protected, guided electronic journal for parents to build a personal action plan. We will adapt the approach for the adoptive family.

The technological aim of the current project, therefore, is to develop a unique series of online workshops specifically adapted to meet the family contexts, circumstances, needs, and issues of the adoptive family. The proposed online programs will entail individualized training and discussion activities. In Phase I, we developed the first of 12 training modules, on understanding and managing adopted children with anger problems. The work included building the introductory video segment exploring several types of anger problems that adoptive families face; writing and programming an interactive discussion board story, exercises, and supplemental materials; designing, writing and programming the guided journal; and re-programming our current online management tools to support the proposed class.

The scientific aim of the project is to evaluate the feasibility of the online workshop. In Phase I we tested the effectiveness of the online *Anger Workshop* with a national sample of adoptive parents. The study examined whether parents who received the online workshop on anger increased their level of knowledge and confidence in dealing with adopted children with anger problems compared to a group of parents who received an online workshop on lying.

B. Phase I Research Activities

Product Development
    Product development included four producibles.
1. Re-Produced *Anger Outbursts*:
   - Reviewed original script, updated information, added interactive exercises.
   - Replaced several still photos with video.
   - Laid out and built interactive exercises.
   - Programmed exercises.
   - Produced DVD version.
2. Produced *Anger Pie*:
   - Wrote script and interactive exercises.
   - Script reviewed by consultant, Charley Joyce.
   - Shot video.
   - Laid out and built interactive exercises.
   - Programmed exercises.
   - Produced a DVD version.
3. Created *Anger Workshop*:
   - Wrote workshop.
   - Programmed a Web-based operating workshop engine.
   - Gathered footage for case study.
   - Assembled workshop onto engine.
   - Wrote, developed, and programmed interactive workshop exercises.
   - Assembled and tested workshop.
4. Re-Produced *Lying Workshop*:
   - Re-wrote script to fit new engine.
   - Gathered footage.
   - Developed and programmed Interactive workshop.
   - Assembled and tested workshop.

Instructional Content
    In Phase I we wrote, produced, and evaluated a training workshop – the first in a series of 12 – for adoptive parents on anger problems in adopted children. The workshop entailed three integrated instructional components: 1) *Anger Outbursts* presents clinical information about adopted children's anger problems; 2) *Anger Pie* delineates essential cognitive-behavioral components parents need to effectively intervene; and 3) The *Discussion Board* gives parents extensive exposure to applying knowledge and skills to problems scenarios. The program was delivered in six classes, two per week over three weeks.
    Below is a brief description of the course content that describes the topics, interactive exercises, and printable handouts covered in each class *(See attached CD sent with application – Appendix C).*
Week 1, Class 1: *Anger Outbursts*
   - *Narration:* The program is hosted by Dr. Rick Delaney, a nationally recognized foster parent trainer and author. In this first class, Dr. Delaney presents essential clinical information that describes four types of anger problems that are frequently found in adopted children: temper tantrums, assaultive behavior, rage towards the mother, and

unpredictable anger. Each is presented in tandem with a case history of a particular child and family. Dr. Delaney offers parents a set of possible next steps to take.

- *Interactive Exercise:* After each type of anger is presented, viewers participate in an interactive exercise in which they have to identify what they feel sets the behavior off in the case history they just viewed and what the underlying emotional purpose may be for the child. Viewers are given several possibilities and receive immediate feedback for each choice.
- *Narration:* Dr. Delaney gives a summary of possible steps parents may consider for intervening.
- *Print Handout:* What's the Point?
- *Journal:* Parents are introduced to their personal and confidential journal, an optional activity for writing their personal thoughts and taking class notes.

Week 1, Class 2: *Anger Pie & Discussion Board*

Narration: Dr. Delaney describes the basic ingredients of a child's angry behavior, which he compares to three slices of a pie: A) Antecedents of an event, B) Behavior and Bias during an anger event, and C) Consequences from the event. Each slice is presented in sequence in extensive detail. Dr. Delaney helps clarify the clinical aspects and dynamics of each slice by relating it to a variety of situations. The figure on the next page shows the graphical interface.

- *Interactive Exercises:* After each part of the Anger Pie is presented, viewers participate in an interactive exercise in which they view a short story by a parent about a child's anger behavior; identify the antecedent, bias, or consequence, respectively, of the behavior from a list of choices; and receive feedback about their choice.
- *Narration:* Dr. Delaney provides some caveats to anger problems by explaining expressions of healthy anger and how parents can capitalize on these events by working together with the child to understand the anger.
- *Print Handout:* Anger Pie: A Quick Summary
- *Narration:* Viewers are given background information about an adopted child's anger problem by a case worker involved in the boy's case.
- *Discussion Board:* Viewers are oriented on how to use the Discussion Board and are then given two questions to discuss about the case just presented.
- *Print Handout:* Caseworker's Description (Transcript)
- *Journal:* Parents can write their personal thoughts and take class notes.

Week 2, Class 1: *Anger Pie & Discussion Board*

- *Narration:* Dr. Delaney reviews and provides perspective on the two questions in the Discussion Board.

- *Narration:* In response to Dr. Delaney's questions, Sierra gives various examples of how William's anger problem manifests. With Dr. Delaney's guidance, they apply Slice A of the Anger Pie and look for the antecedents of William's problem behavior. They follow up with another example in which they work on identifying Slice B of the Anger Pie (Behavior and Bias). First, Dr. Delaney differentiates two types of behavior: warning behaviors and outburst behaviors.
- *Interactive Exercise:* Viewers are given 6 multiple-choice and open-ended questions about warning behaviors and email their responses to the instructor for review and feedback.
- *Discussion Board:* Dr. Delaney gives parents two questions about bias and behaviors that they can work on as a group on the Discussion Board.
- *Print Handout:* Bias and Behaviors (A Summary)
- *Journal:* Parents can write their personal thoughts and take class notes.

Week 2, Class 2: *Anger Pie & Discussion Board*
- *Narration:* Dr. Delaney reviews and provides perspective on the Discussion Board questions about William's biases and outburst behaviors.
- *Narration:* Next, Dr. Delaney begins to explore Slice C of the Anger Pie (Consequences) in response to William's adoptive parents' ongoing frustration with their parenting interventions.
- *Discussion Board:* Parents work together to identify positive and negative consequences and how they are related to William's behaviors and biases.
- *Journal:* Parents can write their personal thoughts and take class notes.

Week 3, Class 1: *Anger Pie & Discussion Board*
- *Narration:* Dr. Delaney reviews and provides perspective on the Discussion Board questions about consequences. Next, Dr. Delaney presents the first steps in developing an Action Plan. In this first part parents learn how they can effectively intervene during the Antecedent stage of William's behavior. Dr. Delaney presents eight ideas to help parents brainstorm solutions. Dr. Delaney continues with the next part of the Action Plan on dealing with William's warning behaviors.
- *Discussion Board:* Parents work as a group to address a variety of questions about dealing with warning behaviors.
- *Narration:* Dr. Delaney brainstorms on William's biases: what they may be and how parents can address them by using open and reflective questions.
- *Discussion Board:* Parents work as a group to formulate open and reflective questions.
- *Journal:* Parents can write their personal thoughts and take class notes.

Week 3, Class 2: *Anger Pie & Discussion Board*
- *Narration:* Dr. Delaney reviews the Discussion Board activity on the open and reflective question technique and provides four possible examples that parents can incorporate. The next step in the process involves pulling all the information viewers have gathered about William's case into a coherent Action Plan, but first viewers read a letter from William's psychologist to his parents which provides them with helpful suggestions for intervention.
- *Discussion Board:* Viewers consider an acceptable behavior, look through brainstorm ideas and find ones that would help achieve the acceptable behavior.
- *Interactive Exercise:* In this wrap-up exercise, parents get the chance to create an Action Plan on their own by responding to prompts that take them through the process. Their responses are emailed to the instructor for review and feedback.

Process for Developing the Media Materials
The Team
The raw media materials were gathered and developed by the media team, which included: Lee White, producer and co-writer; Michael Volk, programmer; William Haldane, director and editor; Kris Hansen, graphic designer; and Damian McDonald, photographer and videographer.

To begin the process, the content development team – Richard Delaney, Ph.D. (principal investigator, co-writer) and Lee White (producer, co-writer) – outlined the specific points to be presented. A script was developed in draft form that included interactive exercises and supplemental material. The script was reviewed by James Kagan, M.D., a child psychiatrist; Carol Nelson, Ph.D.; and Charley Joyce, M.A. The revised script underwent a series of revisions to prepare it for the production process. The raw media materials were gathered and developed by the media team. Talent was hired for both images and voices. All new images and video recordings were made and assembled. Flash technology was used to construct interactive exercises and audio and visual elements. Handouts were written and finalized.

The Process

The media components for the course were developed from the script. The components include video productions, audio productions, interactive exercises with feedback material, discussion board topics and questions, and individual viewer response questions.

An engine that operates the workshop was designed and built. The engine presents the workshop media components to users as segments or chapters in a syllabus and in a sequential format. Users can return to any previously viewed component, but they cannot progress beyond their current place in the syllabus until that segment has been completed. New class meetings are posted each Tuesday and Friday during the 3-week workshop and cannot be accessed until the day of posting. For purposes of the study, the engine further controlled users' progress so that, once they had viewed all of the workshop components, they could not access them again until after completing the posttest assessment.

Class handouts were developed and Personal Journal questions were integrated into the workshop.

Preliminary Assessments

Pilot Study of Knowledge Measure for Phase I

Eight resource parents were recruited via FosterParentCollege.com (FPC). These parents were randomly selected from resource parents who have either taken courses or visited FPC and indicated, in response to a brief survey, that they were interested in participating in research studies. Parents were sent an email announcing the opportunity to participate. Those who were interested were asked to complete a consent form and email it back. When we received their consent form, we emailed them a brief Background Information questionnaire and the initial version of the Anger Workshop Knowledge Questionnaire. Respondents returned their completed questionnaires by email. Participants received $10 for completing and returning the questionnaire.

Six of the resource parents were currently adoptive parents, most of whom had also been a foster or kinship parent at some time; one parent was currently a foster parent and the other a kinship parent. Parents had been caregivers for an average of about 6 years; 6 were female; their average age was about 46 years. All participants had at least some college education. One parent was Hispanic, 5 were White, and 3 were African American.

The initial version of the knowledge questionnaire consisted of 46 multiple-choice and true-false questions on content covering all segments of the module developed in Phase I on anger. Of the 46 items, 11 were answered correctly by all 8 participants. These items were considered too easy and were dropped. Another 14 items were answered correctly by 6 of the 8 participants. We decided to modify 7 of these items that were multiple-choice to increase their level of difficulty. The final version of the questionnaire contained a total of 28 items.

Preliminary Feedback on the Training Content

Participants for a focus group were recruited through a community foster care agency. Of the participants, four were female and one was male; they ranged in age from 31 to 68. In terms of race and ethnicity, 3 were White non-Hispanics; one was a White Hispanic; and one was a Hispanic whose racial background was Native Hawaiian or Other Pacific Islander. For two of the participants, high school was the highest level of school completed; one had completed some college, one an AA degree, and one a bachelor's degree. When asked what type of resource parent they are, four responded foster and adoptive parent, while the fifth reported also being a

kinship parent. They had been resource parents from 4-15 years. Four of the five had previously participated in other parent training on children's anger problems.

At the focus group meeting, parents heard a brief description of the course and the format of the online workshop. All five indicated they had access to high-speed Internet. Participants viewed the program as a group, directed by the group facilitator. The facilitator showed the program in its sequential segments, stopping at each one and asking for feedback. The group also experienced the interactive exercises. When asked for feedback on the videos, one participant commented that they helped clarify things. They all indicated that they learned some new things. One said she liked the idea that you can go back and view segments again, because the program moves pretty fast. Another said she liked the exercises, because they make you think about what you've heard.

Following the discussion, the facilitator showed the first case in the workshop. He introduced the Discussion Board concept and played the first Discussion Board exercise. The group brainstormed answers to two of the questions, and their answers indicated that they had understood the previously heard material.

The facilitator described the site's Journal feature and asked whether any of them thought they would *not* use it. Two of the participants raised their hands. When asked why one said because she's not used to writing – she usually thinks things through in her head. The other didn't offer an explanation.

When asked about their reaction to viewing the audio- and text-only sections of the workshop, without visuals, the responses were mixed. Several said they liked watching the videos better, and commented that the visuals helped hold their attention. One said she was fine with the audio/text-only segments, and all agreed these differences reflected their different learning styles, which our products have been explicitly designed to address.

When viewing the segment on children's biases, participants were able to identify elements of the child's bias portrayed in the story. This discussion was followed by viewing the Consequences segment – first listening to the (text-only) story and then doing the Discussion Board exercise.

When asked how many of the participants would be interested in taking a workshop class like this one, they all said they would. Their final activity was to complete a draft of the satisfaction questionnaire to be used in the study. Despite the fact that they had viewed only some of the workshop segments, still in preliminary form, and had spent just 1½ hours on a workshop intended to be viewed over 3 weeks, their feedback about the course was strongly positive. Focus group members received $30 each for their participation.

Technical Development

All audio was recorded in-house, in studio sessions according to previously approved scripts. The sound engineer cleaned, sweetened, filtered, and edited audio tracks on Cool Edit Pro 1.2a. Sound foley added to the soundtrack.

The Flash animator used final audio files and graphic elements to create a first rough-cut according to the script, using Macromedia Flash MX software. The entire team then reviewed this version and made appropriate revisions until reaching final approval.

The bulk of the production process was conducted using the Flash environment for quick turnaround for Web production and revision. Once approved, all image files were compressed for bandwidth economy and authored for Web. The graphical elements – navigator, buttons, etc. – were developed and finalized for Web usage.

A new operating engine was designed and built for the workshop as described above. The engine allows audio and video components to be delivered sequentially to the viewers. The engine tracks the usage and provides activities during the course.

Project Evaluation

The purpose of the study in Phase I was to evaluate the effectiveness of an online training workshop for adoptive parents on managing anger problems of adopted children with special needs. We wanted to assess whether the online training was effective in increasing parents'

knowledge of adopted children's anger problems, as well as their confidence in using parenting skills to manage the problems, and their satisfaction with the training program.

Participants

Adoptive parents were recruited through two channels: Several social service agencies that are part of an affiliated network with FPC were invited to send announcements about the research study in their newsletters to caregivers in their network. We also sent email announcements about the study directly to 5,000 resource parents who had previously registered and taken parent training courses through FPC. To be eligible to participate, prospective subjects had to meet several criteria. They had to have access to a high-speed Internet connection; be an adoptive parent or plan to adopt; have a child at least 4 years old in their home that was adopted or that they planned to adopt; and not have completed, enrolled in, or viewed any part of the following FPC courses: *Anger Outbursts, Anger Pie, Lying, Lying Workshop*. Participation in the study was voluntary. Participants received $40 and a certificate for 8 training hours from FPC after completing the study. Of the 154 participants who completed the pretest assessment, 36 did not complete the posttest and were dropped from the study, leaving a final sample of 118 – a 23% attrition rate, which coincides with our previous studies. Of the 55 treatment group participants who completed the original study, 36 also completed a follow-up assessment.

Procedure

Interested parents were asked to email us at a dedicated email address for the study. They then received a consent form via email that they completed and returned via email. The consent form included a checklist of the eligibility requirements noted above that they had to individually affirm. When the consent form was received they were given login information to access the course (user name and password), as well as the start and end date of the workshop. Participants received a follow-up email reminder about the start date, their login information, the URL link for their workshop on FPC, how to access the workshop, and contact information for Northwest Media for technical support.

To control for extraneous sources of variability as well as threats to internal validity, we randomly assigned participants to either a treatment condition or a comparison condition. Those in the treatment group participated in the online *Anger Workshop*, while those in the comparison group participated in the online *Lying Workshop*, which had a similar format. Participants could access the assigned workshop from any location equipped for high-speed Internet access.

When first logging on for their workshop, all participants completed an online pretest assessment battery. After completing the pretest assessment battery, participants could access their respective workshop. Once they started the workshop they no longer had access to the pretest. The workshops were structured into 6 classes, 2 per week (posted Tuesdays and Fridays). Participants had to take the workshop activities in sequence and had access only to the relevant narrative instruction, interactive exercises, discussion board, and handouts for the class they were currently viewing, or to classes they had already viewed.

After completing the last class they were prompted to go to the online posttest assessment battery, which included the same outcome questionnaires as the pretest assessment battery, and a *Satisfaction* questionnaire for the workshop. After completing the posttest assessment, they could participate in the other workshop.

Finally, 3 months following the posttest, we emailed all treatment group participants who had completed the original study and invited them to participate in a brief follow-up study. We then re-administered the online outcomes questionnaires to those who responded.

Measures

(All study measures were online self-report measures; copies are included in Appendix A.)

1) Background Information: A 9-item questionnaire developed by project staff and used to obtain participants' gender, age, ethnic and racial background, education, previous parent training on children's anger, and experience as a resource parent.

2) Knowledge – Anger Workshop (K-AW): A 28-item knowledge scale, developed in-house, that used true-false and multiple-choice questions to assess parents' knowledge of the content of the *Anger Workshop*. The outcome score represented the percent of correct answers.

3) Knowledge – Lying Workshop (K-LW): A 26-item knowledge scale, developed in-house, that used true-false and multiple-choice questions to assess parents' knowledge of the content of the *Lying Workshop*. The outcome score represented the total number of correct answers.

4) Confidence – Anger Workshop (C-AW): An 11-item confidence scale, developed in-house. Parents rated how much they agreed with statements about knowledge and skills relevant to the *Anger Workshop* on a scale of 1 (*strongly agree*) to 5 (*strongly disagree*). The outcome score was the mean rating across all items; lower scores represented higher confidence.

5) Confidence – Lying Workshop (C-LW): A 7-item confidence scale, developed in-house. Parents rated how much they agreed with statements about knowledge and skills relevant to the *Lying Workshop* on a scale of 1 (*strongly agree*) to 5 (*strongly disagree*). The outcome score was the mean rating across all items; lower scores represented higher confidence.

6) User Satisfaction – Anger Workshop (US-AW): A 17-item questionnaire that elicited participants' feedback about the *Anger Workshop* regarding their satisfaction with the course content and the Web site. Participants also reported how much time they spent on the training. Other questions asked about participants' experience with the Personal Journal, and to comment about the Web site.

Hypotheses

The following hypotheses were tested:
1. Both the K-AW and the C-AW measures will demonstrate satisfactory (>.70) test-retest reliability coefficients.
2. The C-AW measure will demonstrate satisfactory (>.70) internal consistency.
3. Controlling for pretest differences, we anticipate a main effect of group; that is, the treatment group will outperform the comparison group on the K-AW and the C-AW measures.
4. Differences found for K-AW and C-AW for the treatment group will be maintained at 3 months.
5. We expect strong satisfaction ratings for the *Anger Workshop*; specifically, mean ratings of 2.5 and above on items of the US-AW.

Results

A .05 alpha level was used to determine significance in all statistical tests.

Preliminary Analyses

Means and standard deviations for the outcome measures can be found in Appendix B, Table 3; and Appendix B, Table 4 contains correlations between measures. Independent samples *t*-tests and/or chi-square analyses on all demographic information from the Background Information questionnaire were conducted to detect any differences between the treatment and comparison groups. No significant differences were found. (See Appendix B, Tables 1 and 2, for frequencies and means on the background information items.)

Reliability and Stability of Measures

Stability of the measures over approximately a 3-week period was obtained. Test-retest reliability for the K-AW was .52. Test-retest reliability for the C-AW was .25. The internal consistency of the C-AW was examined using Cronbach's Coefficient Alpha. A coefficient of .97 was obtained, indicating high internal consistency.

Assumptions of ANCOVA

Our study used a pretest-posttest design with a control group. Because we also used random assignment to groups, this experimental design was able to adequately control for all main threats to internal validity (Shadish, Cook, & Campbell, 2002) and allow for more powerful statistical analysis through the use of a covariate. Given the power of our experimental design, we were able to test our hypotheses using a between subjects analysis of covariance (ANCOVA) for each dependent variable. Two separate ANCOVAs were run.

In this design, group served as the independent variable with two levels: treatment and control. Quantitative pretest scores on the K-AW and the C-AW were used as the covariates, and posttest scores on these same measures were used as the dependent variables.

Given our choice of experimental design, many of the theoretical assumptions of ANCOVA were met, primarily that we demonstrated an adequate control of sources of extraneous variability. However, before proceeding, we also needed to evaluate statistical assumptions of this procedure: (a) univariate normality, (b) homogeneity of variance, (c) reliable covariate, and (d) homogeneity of regression slopes.

Visual analysis of histograms and interpretation of the Kolmogorov-Smirnov (K-S) test were used to test the assumption of normality. For the treatment group, all scale scores were significantly non-normal [K-AW pretest, $D(55) = .156$, $p < .05$; K-AW posttest, $D(55) = .158$, $p < .05$; C-AW pretest $D(55) = .120$, $p < .05$; C-AW posttest $D(55) = .279$, $p < .05$]. For the comparison group, scores on the K-AW at posttest were significantly non-normal, $D(63) = .112$, $p < .05$. As ANCOVAs are robust to violations of normality, the analysis was run.

Results of Levene's tests were not significant, indicating the assumption of homogeneity of variance for each model was met.

Two methods were used to assess the reliability of the covariates: test-retest with a Pearson product-moment correlation and internal consistency using Cronbach's Coefficient Alpha. The following results were found: (1) for the C-AW, high internal consistency ($\alpha = .83$) and low test-retest reliability ($r = .25$) were found; (2) for the K-AW, satisfactory test-retest reliability ($r = .52$) was found. It was determined that covariates achieved adequate reliability to run the ANCOVA.

To test the assumption of homogeneity of regression slopes, the ANCOVA was rerun using a customized model which examined the interaction term (fixed factor*covariate). No significant effects were found for the interaction terms, indicating that the assumption of homogeneity of regression slopes was met for each model.

Outcome Analysis: ANCOVA

Results of the ANCOVA for the dependent variable knowledge about anger in adopted children indicate that the covariate, knowledge about anger in adopted children at pretest, was significantly related to knowledge about anger in adopted children at posttest, $F(1, 114) = 51.42$, $p = .000$. There was no significant effect of group on knowledge about anger in adopted children at posttest, $F(1, 114) = 0.09$, $p = .766$.

Results of the ANCOVA for the dependent variable parenting confidence indicate that the covariate, parenting confidence at pretest, was significantly related to parenting confidence at posttest, $F(1, 114) = 9.16$, $p = .003$. There was no significant effect of group on parenting confidence at posttest, $F(1, 114) = .850$, $p = .359$.

Additional Analysis: Dependent *t*-test

Two dependent *t*-tests were run for participants in the treatment group. Results of the dependent *t*-test for K-AW indicate that participants in the treatment group, on average, reported significantly higher scores at posttest ($M = .67$, $SE = .02$) than at pretest ($M = .55$, $SE = .01$, $t(54) = -.8.36$, $p = .000$). On average, scores for participants in the treatment group improved by .12 units. Results of the dependent *t*-test for C-AW indicate that participants in the treatment group, on average, reported significantly lower scores at posttest ($M = 1.99$, $SE = .15$) than at pretest ($M = 2.66$, $SE = .09$, $t(54) = 4.33$, $p = .000$). As this scale is coded so that lower scores represent higher confidence levels, this indicates that participants reported higher levels of confidence following the treatment. On average, scores for participants in the treatment group improved by .67 units.

Two dependent *t*-tests were run for participants in the comparison group. Results of the dependent *t*-test for K-AW indicate that participants in the comparison group, on average, reported significantly higher scores at posttest ($M = .57$, $SE = .02$) than at pretest ($M = .54$, $SE = .01$, $t(62) = 2.41$, $p = .019$). On average, scores for participants in the comparison group improved by .03 units. Results of the dependent *t*-test for C-AW indicate that participants in the comparison group, on average, reported significantly lower scores at posttest ($M = 2.24$, $SE = .15$) than at pretest ($M = 2.51$, $SE = .09$, $t(62) = 2.34$, $p = .023$). As this scale is coded so that lower scores represent higher confidence levels, this indicates that participants reported higher levels of confidence following the treatment. On average, scores for participants in the comparison group improved by .27 units.

Analysis of Satisfaction Data
Mean scores for satisfaction items were well above the criterion set of 2.5 (see Table 5).
Follow-Up Assessment
Two repeated measures one-way ANOVAs were run to determine if the effects of the *Anger Workshop* were maintained at 3 months for levels of confidence and levels of knowledge.

Results revealed that there were significant differences in levels of knowledge about anger in adopted children, $F(1, 35) = 29.08$, $p = .000$, between pretest, posttest, and 3-month follow-up. Mean knowledge scores at follow-up were significantly lower ($M = .640$) than at posttest ($M = .691$); however, they remained significantly higher than at pretest ($M = .562$). There were also significant differences in levels of parenting confidence about managing their children's anger, $F(1, 35) = 12.38$, $p = .000$, between pretest, posttest, and 3-month follow-up. Specifically, confidence levels were significantly higher at posttest ($M = 1.74$) than at pretest ($M = 2.67$), and remained significantly higher at follow-up ($M = 2.13$). There were no significant differences from posttest to follow-up.

Discussion
The development effort in Phase I produced an attractive multimedia training workshop specifically for adoptive parents, on understanding and managing anger problems in adopted children with special needs. All milestones were successfully achieved. The workshop was fully programmed, performance-tested, and launched on our FosterParentCollege.com site. The content and look of the course were fully consistent with the high quality standard of other programs already available on FosterParentCollege.com, and this program similarly included an array of video and visual montage, interactive exercises, and printable handouts to deliver state-of-the-art information to parents on resource parenting. Our software engine was updated to automate, monitor, and deliver the training material in the expanded virtual workshop format.

Although the main interaction effects by group on the knowledge and confidence measures did not reach significance, follow-up dependent *t*-tests provided positive indicators of the effectiveness of the *Anger Workshop*. We found that participants in both the treatment group and the comparison group made significant gains in knowledge and confidence from pre- to posttest, but that the gains were greater on both the knowledge and confidence measures for the treatment group. The use of a comparison group rather than a no-treatment control group in our research design may have diminished the robustness of potential differences because of cross-over effects; namely, parents in the comparison group also received material and messages on parenting. To further explore the finding for the *Anger Workshop* we conducted a follow-up test with participants in the treatment group 3 months after the posttest assessment. We found that parents in the treatment group maintained significant gains in knowledge from pretest to follow-up, although there was a significant dip in gains from posttest to follow-up. Parent confidence remained significantly higher at follow-up. Both these results added to the strength of our original findings.

Adoptive families are rarely given the critical support they need to deal with difficult child behaviors once the adoption is finalized. Adoptive families with special needs children differ from a foster family in significant ways: the family has a commitment to a forever bond; adopted children are aware of the loss of their birth parents and that reunification is not a possibility; the adoptive family assumes financial responsibility for the child; and as a new family member, the child creates a permanent impact on the immediate family and on members of the family's supportive community. Nor are adoptive families provided the level of in-service support that foster families are required to have by the state statue in order to be licensed.

Phase I findings provided support for the feasibility of ongoing online training for parents post-adoptively. Adoptive families in the study also proved to be Web savvy, as well as interested and willing to use the online course for convenient support and training. Parents gave the course consistently strong satisfaction ratings, most notably for the presentation of media-based family stories, for the program's ease of use, for the organization of the program, and their ability to learn about child anger problems specific to adopted children.

Appendix A – Phase I Measures

BACKGROUND INFORMATION

Fill in the answer or answers for the following questions about yourself.

---

1. Type of resource parent: *(check all that apply)*
   ☐ Foster parent   ☐ Kinship parent   ☐ Adoptive parent

2. Number of years you have been a resource parent: _____ years

3. Gender:
   ☐ Female   ☐ Male

4. Age: _____ years

5. Ethnic background: *(check all that apply)*
   ☐ Hispanic or Latino   ☐ Not Hispanic or Latino   ☐ Unknown

6. Racial background: *(check all that apply)*
   ☐ White   ☐ Native Hawaiian or Other Pacific Islander
   ☐ Black or African American   ☐ Asian
   ☐ American Indian or Alaska Native   ☐ Other: _____
                                        ☐ Unknown

7. Highest level of school completed:
   ☐ Junior High   ☐ Associate Arts (AA) degree   ☐ Doctorate (PhD)
   ☐ High School / GED   ☐ Bachelor's (BA/BS) degree
   ☐ Some college   ☐ Master's (MA/MS) degree

8. Have you participated in other parent training on children's anger problems before?
   ☐ Yes   ☐ No

9. If yes, what was the name of the training?

   _____

Anger in Adopted Children
Knowledge Questionnaire

For each question, check the ONE answer you think is correct.

1. In dealing with children's tantrums, parents should:
   a. Stay with the child until the tantrum is over.
   b. Keep other family members out of solving the problem.
   c. Encourage children to use words to get what they want.
   d. Avoid using time out.

2. Which is true about how anger related to abuse affects adopted children?
   a. It's always simmering until something triggers it.
   b. It's mostly unaffected by current life events.
   c. Past abuse has little bearing on current anger triggers.
   d. None of the above.

3. The things that trigger anger in foster and adopted children are the same as those that trigger anger in other children.
   True.
   False.

4. Adopted children's biases, or perceptions of events, are usually not expressed in words.
   True.
   False.

5. A psychological assessment of a child who is assaultive should include:
   a. The child's capacity to attach.
   b. The child's school work.
   c. The child's motor skills.
   d. All of the above.

6. It's good for parents to think about what triggers a child's angry behavior because:
   a. It helps them understand the child's background.
   b. It helps them understand that their child's anger doesn't come out of nowhere.
   c. It helps them understand the consequences of their child's anger.
   d. None of the above.

7. Which of the following statements about the child's bias, or perception of events, is true?
   a. A child's behavior influences his or her bias.
   b. A child's bias is not developed enough to influence behavior.
   c. A child's bias and behavior are usually unrelated to each other.
   d. A child's bias influences his or her behavior.

8. The consequences of a child's angry behavior refer to:
   a. The positive results from an anger episode.
   b. The negative results from an anger episode.
   c. The positive and negative results from an anger episode.
   d. None of the above.

9. How parents deal with the consequences of their adopted child's angry behavior:
   a. Has little bearing on the child's beliefs.
   b. Can unintentionally reinforce the child's anger.
   c. (a) and (b)
   d. None of the above.

10. Adopted children's use of "influential language":
    a. Confuses how parents can understand the child's core issues.
    b. Is a basis for expressing what the child needs, wants and feels.
    c. .Should not be used as a basis for negotiating with the child.
    d. Is a form of emotional manipulation to get what they want.

11. Although a child's anger can be frustrating for parents, it's rarely the reason for a child being placed in out-of-home care.
    True.
    False.

12. If a child with an anger problem feels loyal toward the birth mother:
    a. Foster parents should try to discuss it with the child directly.
    b. Foster parents should try to discuss it with the birth mother.
    c. Let a counselor discuss it as part of the child's psychotherapy.
    d. A and C.

13. Adopted children's anger sometimes increases when the adoption is finalized because:
    a. Their hopes for reuniting with their birth family are gone.
    b. The adoptive parents' behavior may change.
    c. Both of the above.
    d. None of the above.

14. When experienced foster parents have a child with unpredictable anger and there are no obvious explanations for the behavior:
    a. The parents need specialized training.
    b. The child needs to be placed in a different foster home.
    c. The cause may involve the child's nervous system.
    d. It is probably part of the child's basic temperament.

15. Children with backgrounds of abuse and neglect are more likely than other children to:
    a. Get their way when they have a tantrum.
    b. Get angry when they're feeling strong.
    c. Interpret events as being hostile.
    d. All of the above.

16. Which of the following is an example of an adopted child's bias towards parents?
    a. Parents come and go.
    b. To get what I need I have to play being weak.
    c. Fathers can be trusted.
    d. None of the above.

17. Letting an angry child get frustrated at times:
    a. Can help the child learn to wait.
    b. Is useful only for older children.
    c. Is useful only for younger children.
    d. Can damage a child's self-esteem.

18. Anger in young children:
    a. Almost always takes the form of aggression or outbursts.
    b. Is usually expressed through defiant behavior.
    c. Can be aggressive or hidden.
    d. Is usually easy for parents to handle.

19. Which is the most likely reason for erratic anger outbursts in children?
    a. Temperament.
    b. Observing domestic violence.
    c. Being a victim of child abuse.
    d. Brain chemistry.

20. Abused children may take out their anger on other children because:
    a. They are intimidated by them.
    b. They've learned that bigger individuals hurt smaller ones.
    c. They feel they have to even the score.
    d. All of the above.

21. "Specific" and "convergent" questions are preferable to "open" and "reflective" questions for parents to probe for a child's bias.
    True.
    False.

22. Which of the following are key parts in understanding children's angry behavior?
    a. Parents, environment, genetics.
    b. Internal causes, external triggers, genetics.
    c. Triggers, behavior, and consequences.
    d. None of the above.

23. The way a child thinks about something that makes him or her angry:
    a. Can lead to physical warning signs of an anger outburst.
    b. Is generally undetectable before an anger outburst.
    c. Has little bearing on an anger outburst.
    d. None of the above.

24. Showing sympathy when a child throws a temper tantrum:
    a. Is essential to restoring the child's self-esteem.
    b. Only temporarily calms the behavior.
    c. Can encourage the behavior.
    d. None of the above.

25. Which of the following is a recommended step for adoptive parents to prevent their child's angry behavior?
    a. Avoid frustrating the child at all costs.
    b. Wait and reward big steps toward good behavior.
    c. Set up clear rules.
    d. All of the above.

26. The two types of children's anger behavior that are important to observe are:
    a. Warning behaviors and outburst behaviors.
    b. Wishful behaviors and wistful behaviors.
    c. Bias behaviors and influential behaviors.
    d. Incoming behaviors and outgoing behaviors.

27. Children usually throw tantrums because:
   a. They fear adults.
   b. They want to control others.
   c. They have a neurological problem.
   d. They don't have good social skills.

28. A child rolling his eyes could be an example of a behavior trigger for anger:
   True.
   False.

LYING WORKSHOP
KNOWLEDGE QUESTIONNAIRE

For each question, check the ONE answer you think is correct.

---

1. The most common child behavior problem reported by foster parents is stealing, followed by lying.
   - True.
   - False.

2. Which of the following describes a type of insecure emotional tie among foster children:
   - a. Compliant.
   - b. Temperamental.
   - c. Intermittent.
   - d. All of the above.

3. To help a child break the cycle of lying to get others in trouble:
   - a. Have a few family discussions about lying and tattling.
   - b. Give him or her as much of your positive one-to-one attention as you can.
   - c. Spend more time together doing things as a whole family.
   - d. Forbid and don't listen to any tattling.

4. When you catch a child breaking something or making a mess, and he says "I didn't do it," a good approach is to discuss the situation with him right on the spot.
   - True.
   - False.

5. When children lie to impress people or to gain attention:
   - a. It's a normal passing phase in their development.
   - b. It indicates that they feel needy, lonely, or invisible.
   - c. It indicates an inflated sense of self-importance.
   - d. The lies are often very close to the truth.

6. When developing a behavior contract with a foster child who lies, parents should let the child choose the rewards and consequences.
   - True.
   - False.

7. Children who are pathological liars:
   - a. Lie as a way to escape adult control over their life.
   - b. Know when they are lying and when they are telling the truth.
   - c. Often lie to get others in trouble.
   - d. All of the above.

8. Children almost never tell real stories from their past to get sympathy from others.
   - True.
   - False.

9. Children who lie and tattle rarely get discovered.
   - True.
   - False.

10. To help a child who is a pathological liar, parents should:
    a. Be firm and keep tight control over the child's life.
    b. Avoid acknowledging his or her lying.
    c. Use punishment consistently to teach the child not to lie.
    d. Encourage the child to speak out and assert him- or herself more.

11. Behavioral approaches by parents, such as reinforcing telling the truth, can actually worsen lying problems.
    True.
    False.

12. Kids who steal and then lie about it when they get caught:
    a. Need to be punished for both the stealing and the lying.
    b. Need to be punished for the stealing but not for the lying.
    c. Need to learn to ask for what they want.
    d. Need to learn to be less demanding about what they want.

13. In abusive homes, children learn that it doesn't feel any safer when they lie than when they tell the truth.
    True.
    False.

14. For foster or adopted children who lie, negative reactions from others can be reinforcing.
    True.
    False.

15. When talking to foster or adopted children who lie, parents should focus on the present rather than the past.
    True.
    False.

16. In understanding why a foster child lies it's important to look for:
    a. Behavioral clues.
    b. Clues from his or her history.
    c. Both (a) and (b).
    d. None of the above.

17. Constant tattling is common with children who lie to get others in trouble.
    True.
    False.

18. With children who automatically lie when asked questions, it's best to:
    a. Get them to help you understand *why* they lie.
    b. Avoid asking questions.
    c. Point out and discuss their lies.
    d. None of the above.

19. Sometimes, tattling can serve a useful purpose for parents.
    True.
    False.

20. When children lie to get attention, they shouldn't participate in activities that focus public attention on them.
    True.
    False.

21. Foster children that lie may do so:
     a. To avoid negative attention.
     b. To attract negative attention.
     c. Both (a) and (b).
     d. None of the above.

22. Lying and tattling may stem from:
     a. A child's feeling that she has no true place in her family of origin.
     b. A child's troubled relationships at school.
     c. Watching an older sibling's success with these behaviors.
     d. All of the above.

23. Which of the following is *not* a good strategy for dealing with troubled foster and adopted children who lie?
     a. Give consequences for specific actions.
     b. Don't take lying personally.
     c. Ask the child why he or she lies.
     d. Increase the child's negotiation skills.

24. When it comes to lying, parents should avoid negotiating with the child about what he needs and wants.
     True.
     False.

25. Children who lie to get out of trouble:
     a. May find learning to tell the truth difficult.
     b. May be surprised to find that their foster or adoptive parents value the truth.
     c. Need to learn that it's safe to tell the truth.
     d. All of the above.

26. The most effective way to deal with children who lie for attention is to:
     a. Point out their lies when you catch them and discuss the importance of telling the truth.
     b. Get them to tell you why they lie, so you can better understand their problem.
     c. Give them lots of positive attention.
     d. Get professional help.

PARENTING CONFIDENCE – CHILDREN'S ANGER

For each statement, check the number that shows how much you agree or disagree:
1 means strongly agree *and* **5 means strongly disagree.**

	Strongly Agree				Strongly Disagree
1. I understand why adopted children's backgrounds can lead to anger problems.……………….. …………………….	1	2	3	4	5
2. I recognize the different types of anger problems in adopted children........................	1	2	3	4	5
3. I understand why adoption can create emotional problems for the adopted child……….	1	2	3	4	5
4. I understand how adoptive parents can provoke problems in their adopted child………..	1	2	3	4	5
5. I know how to recognize triggers of problem behavior in an adopted child…………..	1	2	3	4	5
6. I know how to detect warning signs of an adopted child's problem behavior……………	1	2	3	4	5
7. I understand the points of view adopted children use to justify their anger…..…………	1	2	3	4	5
8. I can identify the positive and negative consequences of an adopted child's anger from the child's point of view………………….....	1	2	3	4	5
9. I can identify the positive and negative consequences of an adopted child's anger from the parent's point of view……………….....	1	2	3	4	5
10. I know how to analyze an adopted child's anger problem and build a plan of action for changing it…………………….………	1	2	3	4	5
11. I have the parenting skills to carry out an effective plan of action for changing an adopted child's anger behavior………………	1	2	3	4	5

PARENTING CONFIDENCE – CHILDREN'S LYING

For each statement, check the number that shows how much you agree or disagree:
1 means strongly agree *and* **5 means strongly disagree.**

	Strongly Agree				Strongly Disagree
1. I understand why foster children's backgrounds can lead to problems with lying……………….. ……………………	1	2	3	4	5
2. I can recognize the different types of lying in foster children………………....................	1	2	3	4	5
3. I can identify different clues in a foster child's *behavior* about why he or she lies….....……	1	2	3	4	5
4. I can identify different clues in a foster child's *history* about why he or she lies………...……	1	2	3	4	5
5. I understand the different categories of reasons underlying why foster children lie…….	1	2	3	4	5
6. I know how to build a plan of action for changing a foster child's lying problem…....……	1	2	3	4	5
7. I have the parenting skills to carry out an effective plan of action for changing a foster child's lying problem……………………	1	2	3	4	5

Satisfaction Questionnaire – Anger Workshop

For each statement, check the number that shows how much you agree or disagree:
1 means strongly agree** and **5 means strongly disagree.

Feedback about the course

		Strongly Agree				Strongly Disagree
1.	The workshop helped me understand adopted children's anger.	1	2	3	4	5
2.	The workshop helped me understand how to parent adopted children's anger.	1	2	3	4	5
3.	I liked the narration and overall presentation of the material.	1	2	3	4	5
4.	The stories of families were helpful.	1	2	3	4	5
5.	I would recommend this course to other adoptive parents.	1	2	3	4	5

Feedback about the Web site

6.	I would like to receive more adoptive parent training on the Web.	1	2	3	4	5
7.	I thought the Web site was easy to use.	1	2	3	4	5
8.	I liked the way the course was organized into different segments.	1	2	3	4	5
9.	The interactive exercises were helpful.	1	2	3	4	5
10.	I found the supplemental printouts helpful.	1	2	3	4	5

11. How much time did you spend with the training?
    (Check one)

    ☐ 1-3 hours ☐ 4-5 hours ☐ 6-7 hours ☐ More than 7 hours

12. Did you ever log in to your Personal Journal?

    ☐ Yes ☐ No

13. If yes, about how many times did you access the Journal during the workshop?

    ☐ 1 – 5 ☐ 6 – 10 ☐ More than 10

14. If you used the Journal at least once, how helpful did you find it?

    Please enter a number from 1 – 5, where 1 means "very helpful" and 5 means "not helpful at all": _____

15. If you used the Journal at least once, how helpful were the Journal questions for this workshop?
    Please enter a number from 1 – 5, where 1 means "very helpful" and 5 means "not helpful at all": _____

16. What difficulties did you have using the Web site?
    (Write your comment)

    _____

    _____

    _____

    _____

17. Do you have any comments or suggestions to the producers about this project?
    (Write your comment)

    _____

    _____

    _____

Appendix B – Phase I Tables

Table 1

Sample Demographics - Part 1

Item	Comparison Group (n = 63)		Treatment Group (n = 55)		Total Sample (N = 118)	
	%	N	%	n	%	N
Type of resource parent						
Foster only	9.5	6	21.8	12	15.3	18
Kinship only	0.0	0	0.0	0	0.0	0
Adoptive only	9.5	6	16.4	9	12.7	15
More than one type	81.0	51	61.8	34	72.0	85
Gender						
Female	71.4	45	83.6	46	77.1	91
Male	28.6	18	16.4	9	22.9	27
Ethnic background						
Hispanic or Latino	9.5	6	0.0	0	5.1	6
Not Hispanic or Latino	88.9	56	92.7	51	90.7	107
Unknown or not reported	1.6	1	7.3	4	4.2	5
Racial background						
White	85.7	54	81.8	45	83.9	99
Black or African American	11.1	7	12.7	7	11.9	14
American Indian or AK Native	1.6	1	0.0	0	0.8	1
More than one race	0.0	0	5.5	3	2.5	3
Unknown or not reported	1.6	1	0.0	0	0.8	1
Highest level of school completed						
High school/GED	7.9	5	10.9	6	9.3	11
Some college	39.7	25	34.5	19	37.3	44
Associate Arts (AA) degree	11.1	7	10.9	6	11.0	13
Bachelor's (BA/BS) degree	23.8	15	20.0	11	22.0	26
Master's (MA/MS) degree	17.5	11	20.0	11	18.6	22
Other	0.0	0	3.6	2	1.7	2
Previously participated in other parent training on children's anger problems?						
Yes	15.9	10	12.7	7	14.4	17
No	84.1	53	87.3	48	85.6	101

Note. No significant difference was found between the two groups on any of these variables.

Table 2

Sample Demographics - Part 2

Item	Comparison Group (*n* = 63)		Treatment Group (*n* = 55)		Total Sample (*N* = 118)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Number of years a resource parent	6.70	4.57	7.34	6.01	7.00	5.27
Age in years	44.17	9.04	45.07	9.25	44.59	9.11

Table 3

Mean Performance on Outcome Measures, by Group and Pre/Post Status

Group	C-AW [a]			K-AW [b]		
	M	*SD*	*n*	*M*	*SD*	*n*
Treatment-Pre	2.66*	0.66	55	0.55*	0.09	55
Treatment-Post	1.99	1.13	55	0.67	0.13	55
Comparison-Pre	2.51	0.67	63	0.54	0.09	63
Comparison-Post	2.24	0.87	63	0.57	0.10	63

Note. Unless otherwise noted, unadjusted means are reported throughout the table.

* Differences between pretest and posttest are significant at $p < .05$.

[a] Scores on the C-AW scale are reported as the average rating of 7 items on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*), with lower scores indicating higher levels of confidence.

[b] Scores on the K-AW scale are reported as the average rating of the 28 items. Participants were given a "1" if the item was answered correctly and a "0" if the item was answered incorrectly. A total mean score ranging from 0 to 1 was given to each participant.

Table 4

Correlations Between All Outcome Measures, at Pre- and Posttest

	C-AW1	C-AW2	K-AW1	K-AW2
C-AW1	--	.253** (118)	.029 (118)	.047 (118)
C-AW2	.253** (118)	--	-.033 (118)	-.029 (118)
K-AW1	.029 (118)	-.033 (118)	--	.515** (118)

Note. Sample sizes are reported in parentheses.

* $p < .05$

** $p < .01$

Table 5

Means and Standard Deviations for Course Satisfaction Items and Scale – Treatment Group

Read each question and circle the number that best describes your view. *(1 means "Strongly Disagree" and 5 means "Strongly Agree")*	*M*	*SD*	*n*
Feedback about the course:			
The workshop helped me understand adopted children's anger.	4.15	1.19	55
The workshop helped me understand how to parent adopted children's anger.	4.07	1.27	55
I liked the narration and overall presentation of the material.	4.09	1.32	55
The stories of families were helpful.	4.20	1.25	55
I would recommend this course to other adoptive parents.	4.07	1.37	55
Feedback about the Web site:			
I would like to receive more adoptive parent training on the Web.	4.16	1.24	55
I thought the Web site was easy to use.	4.25	1.16	55
I liked the way the course was organized into different segments.	4.15	1.25	55
The interactive exercises were helpful.	4.04	1.20	55
I found the supplemental printouts helpful.	3.85	1.15	55