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Final Research Report:

SBIR Phase II

Volunteer Advocate Academy

**SBIR Grants:
2R44HD054033-02
5R44HD054033-03**

February 2008 – May 2010

Specific Aims - The specific aims for the project have not changed from the original and funded application.

Studies and Results

During years one and two of this Phase II SBIR the project has progress within approximately three months of the planned timeline. We initially expected to extend the project 180 days, but as project year two developed we were able to complete all tasks within 90 days

Module Development

- Module one (from Phase I) has been revised to match the formatting and presentation style created for the other nine modules and the additional modules were completed.
- Research was been completed on the remaining nine modules.
- This aspect has been carefully outlined to not duplicate any existing GAL-CASA training manuals.
- Video scripts for nine remaining modules were been written - with final editing taking place in the last quarter of year two.
- Narrator scripts for the nine remaining modules were been written with built-in flexibility to allow for changes as all filming and on-line text was finalized.
- On-line texts for all ten modules were reviewed and edited. Educational design was completed in January and February 2009 and integrated into the curriculum during year two.
- Each module now has current resources connected via an Internet link accessible from that specific module. Resources were identified and placed within the content management system to allow room to add or change as new resources are published.

Reviews

- User educational questions and on-line text were drafted and reviewed by GAL and education consultants.
- Drafts of all scripts, questions, and on-line text were reviewed by GAL-CASA staff for authenticity. Additional reviewers voluntarily reviewed the materials and will not be a part of the research.
- The National CASA Training Director reviewed module drafts. Discussions for how CASA might be able to use the curriculum were held and National CASA has supported the curriculum as continuing education for member volunteers. Enthusiasm for the project has continued throughout the reviews.

Production

- Filming was complete for all nine additional modules.
- Filming and editing was completed by March (2010).

In moving towards the final goal of having an educational, interactive multimedia curriculum for the project we have been able to achieve the set milestones.

Those milestones that have been met include:

- Design comps
- Educational design research and review
- Ecommerce reviews
- Content management system testing and reviews
- Membership administration testing
- Server setup and testing
- Database setup and administration
- License management system prototyping

It had been determined through initial research that the CASA/GAL Academy would be developed utilizing MySQL, PHP, XHTML, CSS, JavaScript, and AJAX. We have managed to integrate and customize a content management system called Expression Engine that will handle a variety of different requirements for the project. Expression Engine has been tailored to these specific needs:

- **Member Management** - ExpressionEngine is a true multi-user system. Each user can be granted a wide range of privileges, letting you define with precise control what each user is permitted to do. Members can "self-activate" via email or you can validate accounts manually. The member profile system permits you to add your own fields, build your own data model, and collect the information needed from users. You can define an unlimited number of Member Groups, each with over 40 individual user privileges. Each member of the community is assigned a Member Group, determining what they are allowed to do.
- **Communications** - ExpressionEngine comes with an integrated double opt-in/opt-out mailing list module that supports multiple lists and a custom template for each list.
- **Content Management** - ExpressionEngine supports an unlimited number of weblogs. You can separate your weblogs into independent pages, or you can put multiple weblogs on the same page. Each section can have its own unique set of entry fields. These can be input boxes, pull-down menus or text areas.
- **Server Utilities** - A full complement of SQL utilities, including database optimization, database backup, manually submitted queries, table info, process info, and more.

- Security - Comprehensive suite of security features that are as advanced as any publishing platform on the market, including 160 Bit SHA1 Password Encryption.
- Other utilized features – Forums and forum management to create and foster a community around the program. Digital newsletter module to allow increased communication with participants. Ecommerce module will allow us to provide books and information pertaining to the program.

With the content management system in place, we will be able to take full advantage of the online presence and community that grows around the project. It will also allow us to more easily adapt the project in the future as we utilize data and feedback from users.

Significance

The research aspects of this project have provided rich data on the use of a technologically advanced method for delivery of workforce development training – eLearning via the Internet. The data will add to the scientific field in that it could provide the basis for an evidenced-based eLearning program that will provide court appointed special advocates with easily accessible opportunities to gather information related to their roles in working with adolescents, the child welfare system, and family court system. The impact on health of children and particular adolescents will be enhanced by training of a workforce that can better assess and develop reports for court(s) that have a direct impact on the well-being of involved youths and their families.

In addition, the publication we are developing from the project should add to the ambient literature on the use of eLearning for workforce development efforts within the human services professions. A movement from live training to Internet delivered multimedia curricula could have real impact on agencies with limited resources available for staff training. Our business model has been focused on development of such efforts and commercially could be a viable revenue stream. The new resources generated by this programming could allow for further expansion within the private sector.

Project Timeline

The project was completed within ninety days of the original timeline for completion. The focus groups (one in Virginia and one in North Carolina) were held over four months and the full study was commenced in month 21 and completed in month 25. All of our technical objectives were met and the eLearning program is now fully operational for Phase III – post month 27.

Research Report: Volunteer Advocate Academy Curriculum Phase II

This report details the findings from the analysis of the field test of the Volunteer Advocate Academy curriculum. A mixed-model analysis was used to test main effects of the training curriculum on knowledge, the effects of time alone on knowledge, and the effects of taking the knowledge pretest on the posttest irrespective of having been exposed to the training curriculum. Scores were compared between groups to assess time effects, and scores were tested within groups to test for pretest influence and the main effect of training.

The design called for three groups: two control groups of 20 participants each (testing time and the effect of the pretest alone), and one treatment group of 80 participants testing the main effect of training. The final group sizes included in the analysis after attrition and the elimination of participants who supplied incomplete data were 19 sets of pretest scores for each control group, 19 sets of posttest scores for the control group that took the posttest, 69 sets of pretest scores for the treatment group and 62 sets of posttest scores for the treatment group. This very small attrition did not appreciably affect the original statistical power of the design.

The three major research questions are listed below:

- 1) Does the Volunteer Advocate Training Curriculum result in significantly increased knowledge scores on a knowledge test of 25 questions focused on adolescents in the foster care system, and their involvement in court?
- 2) Is any such affect due to random events that may have occurred over time?
- 3) Is any such effect due, or augmented by, the use of the knowledge test as a pretest prior to exposure to the training curriculum

To test these possible effects, three groups of participants were comprised by purposeful random assignment from a larger group of potential participants. "Purposeful random assignment" was achieved by random assignment to one of the three treatment conditions from smaller groups of participants comprised by age, gender and race/ethnicity. This strategy maintained the principles of random assignment overall while achieving approximately equivalent proportions of participants representing the age, gender and race/ethnicity categories within the larger pool of participants.

The main effect of training was tested by comparing the pretest scores of the treatment group to the posttest scores of that group (i.e., within group). Random effects of time were tested by comparing the pretest scores of Control Group 1 to their posttest scores, without being exposed to the training curriculum, but being exposed to any possible random events or time effects that may have occurred during the same period of time that the treatment group was being exposed to

the training. Both the treatment group and Control Group 1 took the pretest and the posttest at the same time, the only difference being the exposure to training. Control Group 1 also was used to test any effect that taking the pretest, per se, might have on subsequent posttest scores, assuming no effects due to time or random events. Control group 2 was used solely to test the effects of time, in that they took the pretest at the same time that the treatment groups and Control Group 1 took the posttests. Assuming group equivalency, and the absence of random or time effects, the Control Group 2 retest scores should be the same as the pretest scores of the other two groups, even though taken at the end of the training interval, and waiting interval, experienced by the Treatment Group and Control Group 1.

Thus, if the Null Hypotheses associated with group equivalency, main effects and random events/time are to be rejected, none of the group membership variables (age, gender, race/ethnicity) should be significantly different, using the Chi Square test for categorical data; none of the pretest scores should differ by group, regardless of when the pretest was taken; the pretest and posttest scores should not differ in Control Group 1 because they did not receive the training and because there is no pretest effect on the posttest in the absence of treatment; and the posttest scores for the Treatment Group should be significantly different from the pretest scores such that increased knowledge is reflected in the posttest scores. Between and within group pretest/posttest scores are analyzed using Analyses of Variance and t-tests.

An analysis of group equivalency reveals that the purposeful random assignment strategy was effective, there being no differences among the groups with respect to age, gender or race/ethnicity. Beginning with age, the mean ages of the three groups (Treatment, which received the training, Control 1, which received the pretest and posttest, and Control 2, which received only the pretest at the time that the other groups received the posttest) were 47.4, 46.8, and 47.2, respectively. An ANOVA used to test the groups' scores contributing to these means revealed no differences among the groups ($F = 0.02$; $df = 2, 97$; $p = .98$). With respect to ethnicity, each group was 5% Hispanic/Latino ($\chi^2 = 0.01$, $df = 2$, $p = .99$). The distribution of the race categories (Asian, African American, Whites, and those comprising "Other" was essentially equivalent ($\chi^2 = 1.96$, $df = 6$, $p = .92$). With respect to gender, the proportion of males in the three groups (Tx, C₁ and C₂) was 5%, 11% and 11%, respectively, representing very small, non-significant results ($\chi^2 = 1.17$, $df = 2$, $p = .56$). The equivalence of the groups with respect to demographics removes these potential sources of bias from consideration when examining main treatment effects of the study.

Analysis of all treatment effects and control variables permits the rejection of all null hypotheses. The three group pretest means for Control Group 1, Control Group 2, and the Treatment Group were 81.7, 81.4, and 78.8, respectively; a

total between-group mean difference of only 2.9 ($F = 0.682$, $df = 2, 97$, $p = .508$). The lack of any difference among these mean scores suggests that the groups were equivalent at the time of the knowledge pretest, regardless of when the pretest was taken, and suggests that there were no time effects that influenced naïve participants (Control Group 2) who took the pretest at a chronologically later time than did the Treatment Group and Control Group 1.

The absence of random and time effects, as well as the absence of a pretest effect on the posttest in naïve subjects is supported by the complete absence of any pretest-posttest difference within Control Group 1. The group's pretest mean

index score was 81.7, and its posttest mean index score was 82.9, a very small and statistically insignificant difference of 1.2 ($t = 0.598$, $df = 18$, $p = .559$). The equivalency of groups, both demographically and in terms of knowledge prior to exposure to training, and the absence of random or time-related influences on posttest scores suggests strongly that any differences in the pretest/posttest score of the treatment group are due to the exposure to the training curriculum, as the main effect in the study. In fact, the mean posttest index score for the treatment group was 64.3, compared to a pre-test mean of 78.8. Note that lower scores are desirable, due to the scaling strategy employed in the test instrument. The difference of 15.5 between the pretest and posttest mean index scores is statistically significant ($t = 9.18$, $df = 61$, $p < .001$). Study participants in the Treatment Group were also asked to rate the curriculum, various features of the web site presentation, and the amount of knowledge gained, based upon self-rating of knowledge before and after experiencing the curriculum. All items employed a 7-point Likert-scale strategy for assessing these affective and self-rated dimensions. The first of the qualitative research questions focused on the contents of the curriculum. Specifically, participants were asked how informative they found the curriculum to be. The very large majority (85%) indicated that the curriculum was very informative. In fact, the top two categories accounted for 95% of all participants.

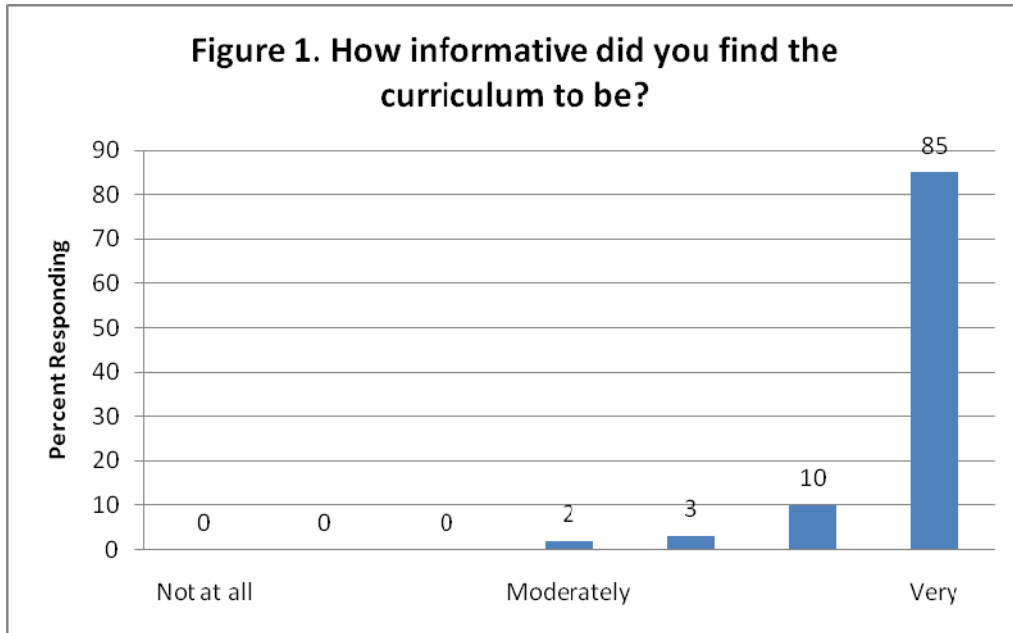
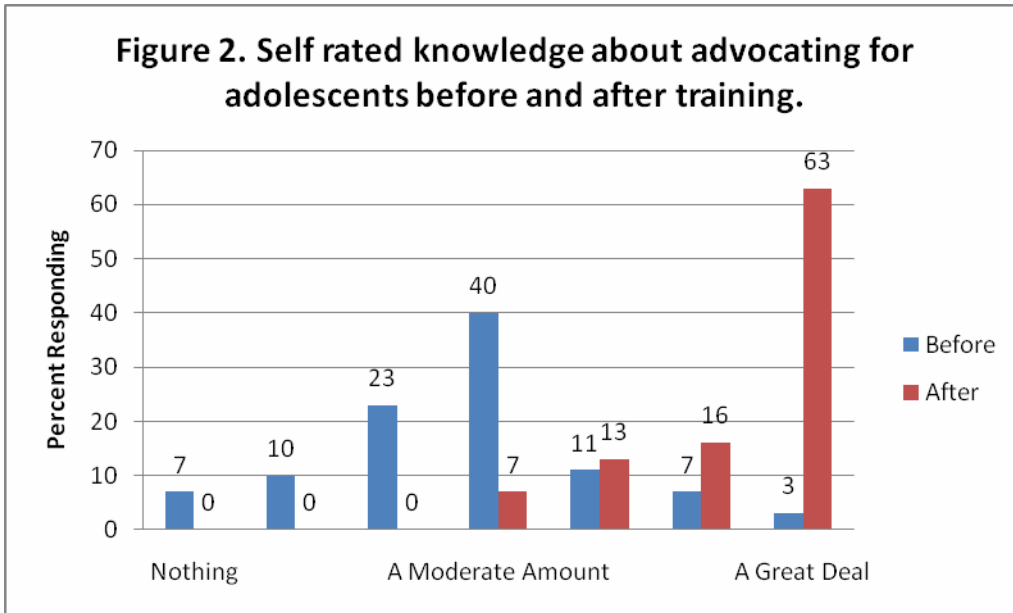


Figure 2 presents data on the self rating by participants of their knowledge about advocating for adolescents. The post-test rating occurred immediately after completion of the curriculum. The pre-training rating was done retrospectively, at the end of the training. It is clear that the large majority of participants (80%, combined) had only a moderate or lesser amount of knowledge prior to the training. In fact, nearly one fifth (17%) indicated that they had almost no knowledge or no knowledge prior to training. After the training, a substantial majority of participants (63%) selected the highest knowledge category. Clearly, these data indicate that the training was very successful in increasing participants' self-ratings of knowledge about advocating for adolescents in the courts.



The project relies heavily on the design of the website. The intention was to engage participants to complete the self-paced training by assuring that the site was visually appealing and easy to navigate, and that the acted scenes were realistic, convincing and informative. Participants were asked specifically about each of these website properties.

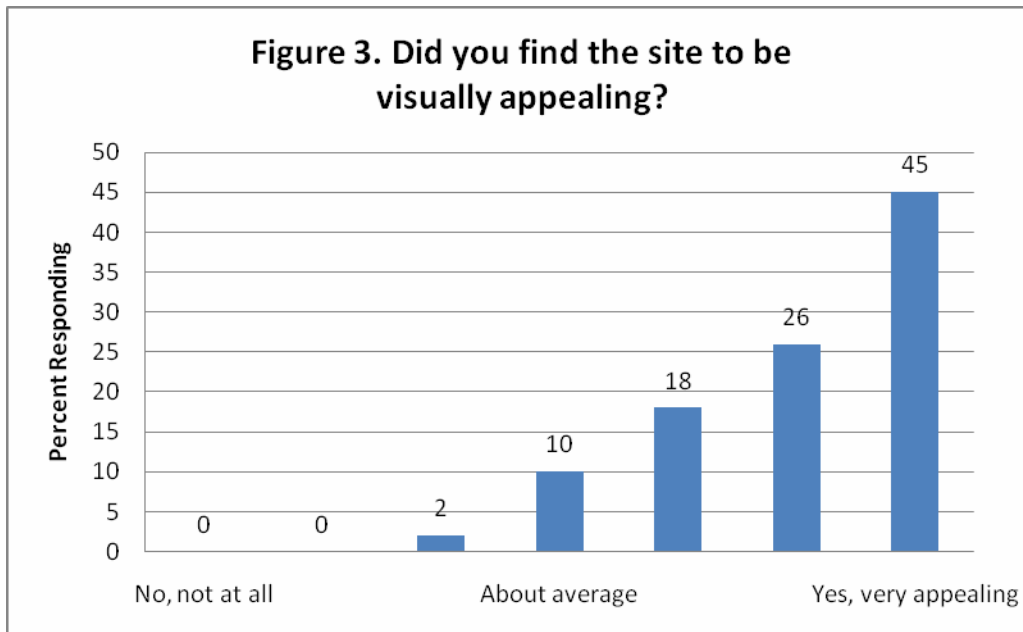
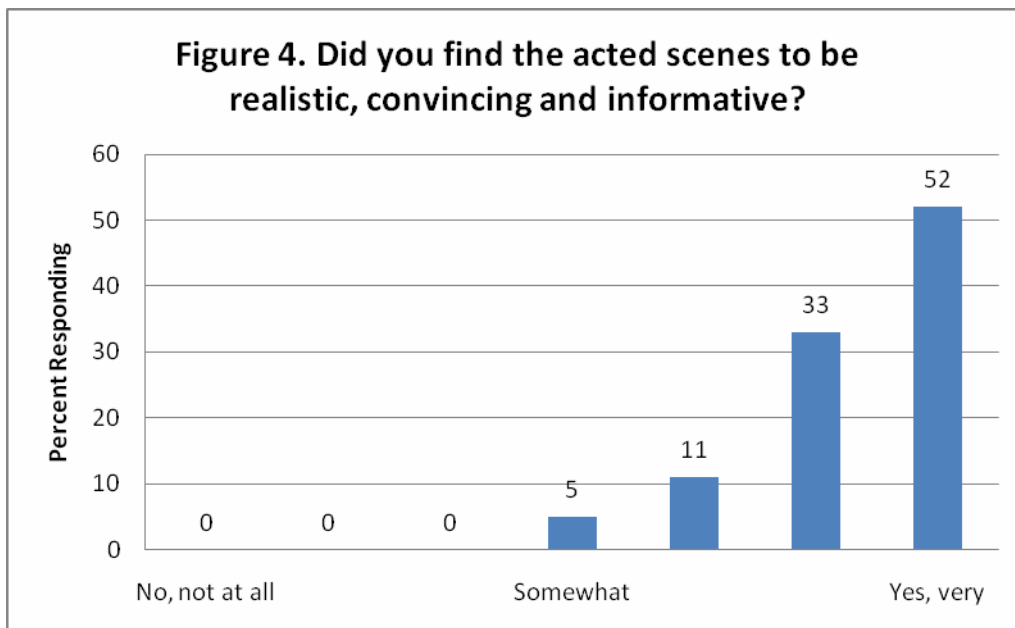
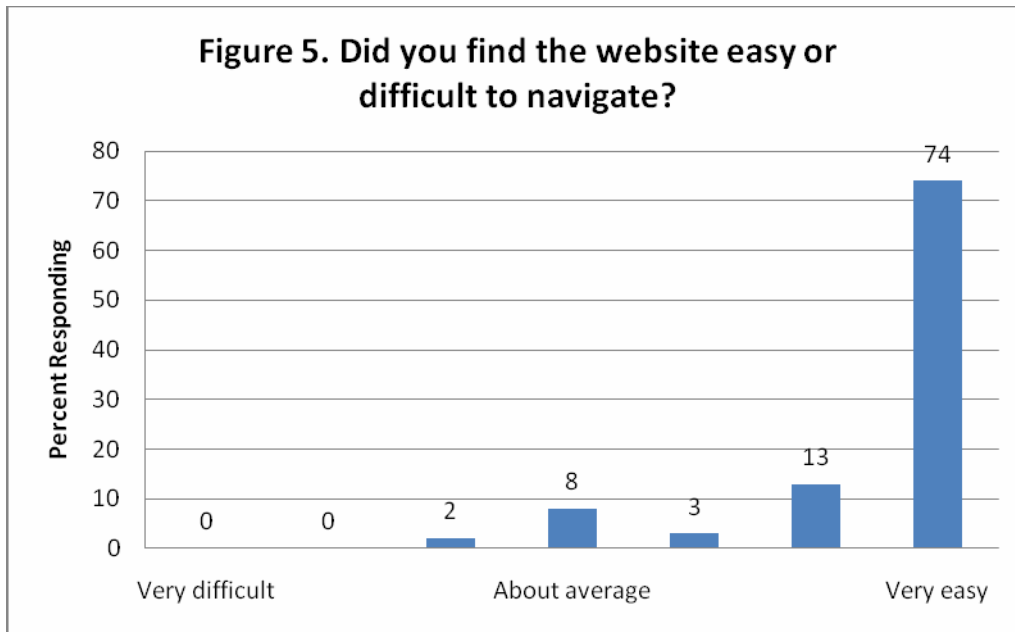


Figure 3 indicates that the very large majority of participants found the site to be visually appealing. Participants also found the acted scenes to have succeeded in their purpose. Figure 4 presents participants' answers to this question, and like visual appeal, the very large majority (85% selected the top two categories) found them to have met these objectives.



The large majority of participants also found the website to be easy to very easy to navigate (see Figure 5, below)



At the end of the qualitative survey, an open-ended text field was provided and participants were asked to provide any other comments they might have that would help the site and curriculum developers better understand participants' reactions to their training experience, even in areas not specifically addressed in the survey questions. The comments were very positive and reflect a high degree of enthusiasm for the site and the contents of the training. A sample of these comments is provided below.

- I didn't know what to expect. My eyes have been opened to a vast amount of information and knowledge I had was enhanced by the information provided. Nothing was too long or boring. The narrator presented the information as a truly concerned individual and the resources provided will be very helpful for future cases. I am pleasantly surprised by the experience and wish you a great deal of success. I think all new CASA volunteers would benefit from this learning.
- Compared to the typical "online" class that I have taken before, this one was more interesting and actually kept my attention the whole time. The auditory and visual information was great. The situations that were acted out were very realistic and allowed for a real life application of the information presented. The navigation of the course was extremely easy, and likely older adults and those with less developed computer skills could still maneuver around the course. I found the course to be very informative. I think that this will help volunteers immensely. Thanks for allowing me to participate!
- Thank you for allowing me to participate. I found the information very valuable and know it will help me in the future when I am an advocate for teens/adolescents. I really learned a lot about the stages of maturity of the adolescents and that will surely help when addressing social and educational issues. It was a great teaching tool and very well put together. Thank you

- Since my involvement as an advocate has been limited strictly to younger children, the information in the course, as well as the web site references, will be invaluable for my involvement with adolescents. There was much information contained within the course that I never realized I knew so little about but now have resources from which to draw. I will not always have the answers, but now will surely have a starting point to serve as a better advocate.
- All youth advocates should be required to use this program.
- Excellent overall and a very good way to acquire the CEU's we need each year. Lecturer was easy to understand and provided good analysis. The inclusion of related resources like web sites and checklists that we can use with our adolescents was value added. I know I will refer to this material on a regular basis, especially when assigned to a CINA ready to age out. Thank you for the opportunity to participate in this evaluation.
- My experiences in dealing with my CASA supervisor are very similar to those presented in these situations. My experience has been in dealing with much younger children so the interactions between advocates and other adults in the system has been a great help if I ever have to deal with older youth
- This was a very well designed site and program. The method of presentation was well thought out and created to help reinforce what was being learned. The additional pages linked to the site were also helpful - I have copied several with the plans of using them as resources in the future. In short, this program was well conducted and I am grateful for what I have learned. It has already helped me with my current case.
- This is a very thoughtful curriculum focusing on teens at risk. I found the resources and videos to be informative and helpful. I learned a great deal about teens and the need to focus on life skills. In other words, we cannot assume anything!
- This is an excellent program! The curriculum covers important topics, pedagogy is solid, and production values are top-notch. I'll be a better advocate thanks to this program.
- I wish I had this program in my initial training as a CASA. It would be nice to do this throughout the year to have info stay fresh in the mind.
- I enjoyed this course very much, as it showed me many ways to help an adolescent in foster care. It also made me think of the individual child and how to seek the assistance they need. Thank you for choosing me to take part in this course.