Getting to Know ADDIE

Presented to
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Georgia State University
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Getting to Know ADDIE

Introduction and Background

ProSolutions Training is the professional development division of Care Solutions, Inc, a management and consulting firm. The on-line training division was launched in 2008, offering online continuing education for working professionals primarily in the fields of Early Care and Education and Human Services. Accredited by the International Association for Continuing Education and Training (IACET) to offer Continuing Education Units (CEUs), ProSolutions Training offers affordable online training with more than 100 individual online courses in both English and Spanish, multi-course packages, and nationally recognized certifications in Early Care and Education, nationwide. It also offers customized course development and online hosting for businesses and organizations.

Early Care and Education in the United States is licensed and regulated individually by each state. There are varying qualifications for administrators and staff members, and varying continuing education requirements. There are also just as many methods and regulations regarding the approval of continuing education offerings for administrators and staff members as there are states. Often referred to as “community-based training” in the field, it is managed by state agencies, each with its own method and requirements for approval. Every online course ProSolutions offers is processed through each state’s approval system so it can be offered for both state specific and CEU credit which is required for renewal of several national credentials in the field. In an effort to expand its customer base, ProSolutions has identified trainers working in the field of Early Care and Education as being an underserved population. For instance, in Georgia, state approved trainers must accumulate 70 clock hours or 7 CEUs of continuing
education in topics related to adult learning, instructional design, or content area topics every five years to keep their training approval current. Yet, there are few affordable and accessible prospects for them to obtain needed continuing education related to the design and development of effective training or working with adult learners. Therefore, trainers’ professional development efforts tend to be focused on content topics, which does little to improve or update their knowledge and skills related to the developed and delivery of effective training.

“Getting to Know ADDIE” is a short e-learning segment built in Storyline 360, using a scenario-based approach to familiarize trainers working in the field of Early Care and Education with standard program development procedures, a topic few have ever been exposed to. This segment is intended to become an instructional component of a more complex program related to the crafting of effective programs for adult learners. This report describes formative evaluation procedures undertaken during the program’s development and formative evaluation efforts seated within the program designed to assess learners’ progress.

**purposes and audiences**

The appropriateness of different types of questions asked in evaluating a program can change as the program moves from the design stage to development, implementation and to maturity. A balance of formative and summative assessment is often routine. Summative evaluation, conducted following the implementation of a program typically can focus on program content, organization of content, activity appropriateness, learning, the instructor, the learning environment, etc. The outcomes of summative evaluations often are used to improve forthcoming versions of the training. The purpose of the frequently informal formative assessment is to guide program design, development, and implementation as it is happening, and
to assess learner progress in real time. Formative assessments happen prior to and during implementation.

The table below provides information regarding the formative evaluation efforts for this program. In all instances the program developer is the secondary audience, using feedback provided by the primary audience to fine-tune the segment, making needed adjustments.

<table>
<thead>
<tr>
<th>Formative Assessment</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary audience:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProSolutions Training</td>
<td>• Subject matter expert review of content</td>
<td>• Ensure content is on target</td>
</tr>
<tr>
<td>Sr. Training specialist</td>
<td>• Subject matter expert review of e-learning components</td>
<td>• Ensure LMS compliance</td>
</tr>
<tr>
<td>Care Solutions, Inc.</td>
<td>• Credential compliance review</td>
<td>• Ensure all elements present for credentials</td>
</tr>
<tr>
<td>VP Information Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProSolutions Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credentialing Specialist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field Test</td>
<td>• Field test the course and provide feedback.</td>
<td>• Determine usability features – UX feedback</td>
</tr>
<tr>
<td>Primary audience: 3-5</td>
<td></td>
<td>• Assess content</td>
</tr>
<tr>
<td>Trainer/Educators</td>
<td></td>
<td>• Assess Instruction strategy</td>
</tr>
<tr>
<td>Learner Pre-course Assessment</td>
<td>• To be completed by learners prior to beginning of the whole course.</td>
<td>• Determine areas of learner weakness</td>
</tr>
<tr>
<td>Primary audience: Learners</td>
<td>• Ten-question fixed response exercise will provide baseline information</td>
<td>• Inform summative assessment</td>
</tr>
<tr>
<td></td>
<td>regarding learners’ prior knowledge of a variety of program development and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>adult education content</td>
<td></td>
</tr>
<tr>
<td>Course Feedback</td>
<td>• Feedback provided on incorrect answers during activities</td>
<td>• Learner feedback</td>
</tr>
<tr>
<td>Primary audience: Learners</td>
<td></td>
<td>• Identify areas that need additional attention</td>
</tr>
</tbody>
</table>
Decisions and Questions

Unanticipated consequences are always of concern. Listed below are a number of decisions that will need to be made once the entire training is ready for publication.

- What to do if a learner cannot perform adequately after two tries on the end-of-course test.
- Should it be found that the program failed to achieve its goal, what event or evidence led to the program being judged a failure?
- If students did not remain engaged during the course, what needs to be changed?
- What recommendations should be made for current and future plans to improve the effectiveness of the program?
- Was there enough foundation content in each section to build subsequent content presentations?
- Was the instructor perceived as being helpful, if not what can be done to improve interaction with the learners?
- Is there a need for more hands-on instruction, if so how can this be remedied?

The purpose of this evaluation process was primarily to determine revisions and refinements necessary to enhance effectiveness. Additionally, the outcomes could provide documentation to win commitment and support for future online training endeavors. It was planned that the data gathered would answer the following questions:

- How well did participants like the course?
- How relevant was the course to participants’ needs?
- Will participants be able to apply knowledge and skills on the job?
- What factors helped or hindered their performance?
- What can be done to strengthen performance enhancers and reduce performance inhibitors?
- How effective was the delivery method?
- How effective was the design in supporting the objectives?
Methods

As defined by Younglove (2011), “Formative assessment is the frequent, interactive checking of student progress and understanding in order to identify learning needs and adjust teaching appropriately” (p. 21). Unlike summative assessment that evaluates participant learning according to a benchmark, formative assessment monitors learner understanding. This process allows instructors to improve the effectiveness of the instruction in real time. Several assessment measures will be used including a pilot run of the course with review by potential participants, pre-course assessment, self-review, SME review and feedback, alternative formal assessment, and an end-of-course mastery test. Since “Getting to know ADDIE” is just one segment of a larger course there are limited opportunities for formative assessment. The table below provides the details of assessment efforts.

<table>
<thead>
<tr>
<th>Formative Assessment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME Review</td>
<td>Subject matter expert review IT Specialist review</td>
</tr>
<tr>
<td>Pilot Run of Session with Review by Potential Participants</td>
<td>Five potential participants will review the course and be asked to comment on clarity of directions, helpfulness of links, procedures, learners’ comfort with the technology, and resources provided. Learners were observed during the pilot for any difficulty in managing the technology.</td>
</tr>
<tr>
<td>Pre-course Assessment</td>
<td>Completed by learners prior to the course beginning this five-question fixed response exercise will provide baseline information regarding learners’ knowledge of the ADDIE model and program planning.</td>
</tr>
<tr>
<td>Self-Review &amp; with feedback,</td>
<td>Learners will complete a self-review of work during the instruction using a self-review worksheet that includes an alternative formal assessment that will be submitted to the instructor.</td>
</tr>
<tr>
<td>Checkpoints with scoring throughout the segment.</td>
<td>Learners answer questions, scoring will be monitored.</td>
</tr>
</tbody>
</table>
Sample

Professional recommendations were sought from three SMEs. Five individuals participated in the pilot.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME</td>
<td>• ProSolutions Training - Sr. Training Specialist -</td>
</tr>
<tr>
<td>SME</td>
<td>• Care Solutions, Inc. - VP Information Technology</td>
</tr>
<tr>
<td>SME</td>
<td>• ProSolutions Training - Credentialing Specialist</td>
</tr>
<tr>
<td>Pilot</td>
<td>• 5 Care Solutions/Pro Solutions staff members included three GA approved trainers, 2 IT staff</td>
</tr>
<tr>
<td>Participants</td>
<td></td>
</tr>
</tbody>
</table>

**Instrumentation**

Prior to pilot testing, participants were provided a five-question fixed response instrument to determine previous knowledge of the ADDIE model. The Post-Course Assessment, the same instrument was provided to the participants to complete immediately following their activity with the pilot.

<table>
<thead>
<tr>
<th>Pre/Post-Course Assessment</th>
</tr>
</thead>
</table>
| 1. **What does the acronym ADDIE stand for?** | • Analysis, Design, Develop, Implement, and Evaluate  
• Acquire, Design, Deliver, Implement, Evaluate  
• Analysis, Design, Deliver, Imagine, Evaluate  
• Analysis, Delivery, Design, Imagine, Examine |
| 2. **What type of model is ADDIE best described as?** | • Educational Technology  
• Educational Psychology  
• Instructional Design  
• Constructivism |
| 3. **Which of the following is a component of the Analysis phase of the model?** | • Determine the scope of the project  
• Develop the project  
• Determine the program structure and duration  
• Distribute the project |
| 4. **Which of the following is a component of the Design phase of the model?** | • Identify the target audience  
• Develop the handouts and instructions  
• Specify assessment and evaluation methods  
• Gather evaluation data |
| 5. **Which of the following is a component of the Development phase of the model?** | • Estimate costs and the schedule  
• Develop the handouts and instructions  
• Specify assessment and evaluation methods  
• Gather evaluation data |
Each individual taking part in the pilot test was provided a Learner Self-Evaluation form to complete following their participation. It included a Likert style rating from 1-5.

<table>
<thead>
<tr>
<th>Learner Self-Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you rate the quality of the content?</td>
</tr>
<tr>
<td>2. How would you rate the quality of the technology used in the course?</td>
</tr>
<tr>
<td>3. How would you rate your knowledge increase on the subject as a result of this course?</td>
</tr>
<tr>
<td>4. How clear were the directions in the course?</td>
</tr>
<tr>
<td>5. How clear were the learning objectives in the course?</td>
</tr>
<tr>
<td>6. How would you rate the visual appeal of this course?</td>
</tr>
<tr>
<td>7. How likely are you would you be to recommend this course to others?</td>
</tr>
</tbody>
</table>

Please add any other comments or concerns you have about the course in this space:

**Limitations**

The outcomes from this evaluation are limited in scope to the group of previously described participants, three of whom are approved through the Georgia Training Approval System and two were IT specialists. The small sample size was a result of time limitations and access to participants. In general, the audience for this training function as trainers on a part-time
basis while holding full-time positions in Early Care and Education or a related field. Their education is primarily in the field of Early Childhood Education and the training add-on is typically an outcome of doing well enough in the field that they began training others. Therefore, most have little exposure to program development and adult learning principles.

**Analysis and Results**

Pre-Course Assessment Outcomes n=5

<table>
<thead>
<tr>
<th>Question</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| **1. What does the acronym ADDIE stand for?** | • Analysis, Design, Develop, Implement, and Evaluate  
• Acquire, Design, Deliver, Implement, Evaluate  
• Analysis, Design, Deliver, Imagine, Evaluate  
• Analysis, Delivery, Design, Imagine, Examine |
| **2. What type of model is ADDIE best described as?** | • Educational Technology  
• Educational Psychology  
• **Instructional Design**  
• Constructivism |
| **3. Which of the following is a component of the Analysis phase of the model?** | • **Determine the scope of the project**  
• Develop the project  
• Determine the program structure and duration  
• Distribute the project |
| **4. Which of the following is a component of the Design phase of the model?** | • Identify the target audience  
• Develop the handouts and instructions  
• **Specify assessment and evaluation methods**  
• Create media content |
| **5. Which of the following is a component of the Development phase of the model?** | • Estimate costs and the schedule  
• **Develop the handouts and instructions**  
• Specify assessment and evaluation methods  
• Gather evaluation data |
With only two correct answers on the pre-test assessment, it is evident that the participants are unfamiliar with the content.

The Pre/Post Test outcomes show significant improvement in scoring with only one missed question on the Post Test.
The Learner Self-evaluation provided consistently high satisfaction with the course content and technology. The user experience appears to be positive with all scoring above 4.6 on a 5.0 scale. Because this is only one segment of a multi-segment course, the opportunity to respond was limited. There were no additional requests or comment from the participants.

Observations made during the pilot indicated all participants were comfortable with the technology and there were no indications of technical difficulties.

Recommendations

Over the course of the design and development of this e-learning segment, a number of recommendations were received from SMEs and integrated into the segment including:

- Make it a short introductory segment that can be inserted into a more complex training
- Add links to related readings to each phase of the ADDIE Model followed by thought provoking questions regarding the link reading
• Use a scenario-based approach
• Keep it light and entertaining
• Make it engaging
• Use characters that are representative of perspective participant
• Add audio

In part, because of the small sample size, few recommendations were received from the participants. The user experience seemed to have been positive. If time had permitted I would have preferred to administer a Post-Test at a later date to determine if the learners remembered the content and determine if they had used it at all in their practice. On recommendation of another SME, I would like to add audio to the segment, which I may be able to do when the entire course is finished. I am considering adding links to readings and including some sort of activity following each reading that could turn it into a stand-alone 1 hour class.
References