An Instructional Systems Model Proposed for

Digital Solutions LLC

Submitted as a Final Assignment for

EME 5601: Introduction to Instructional Systems
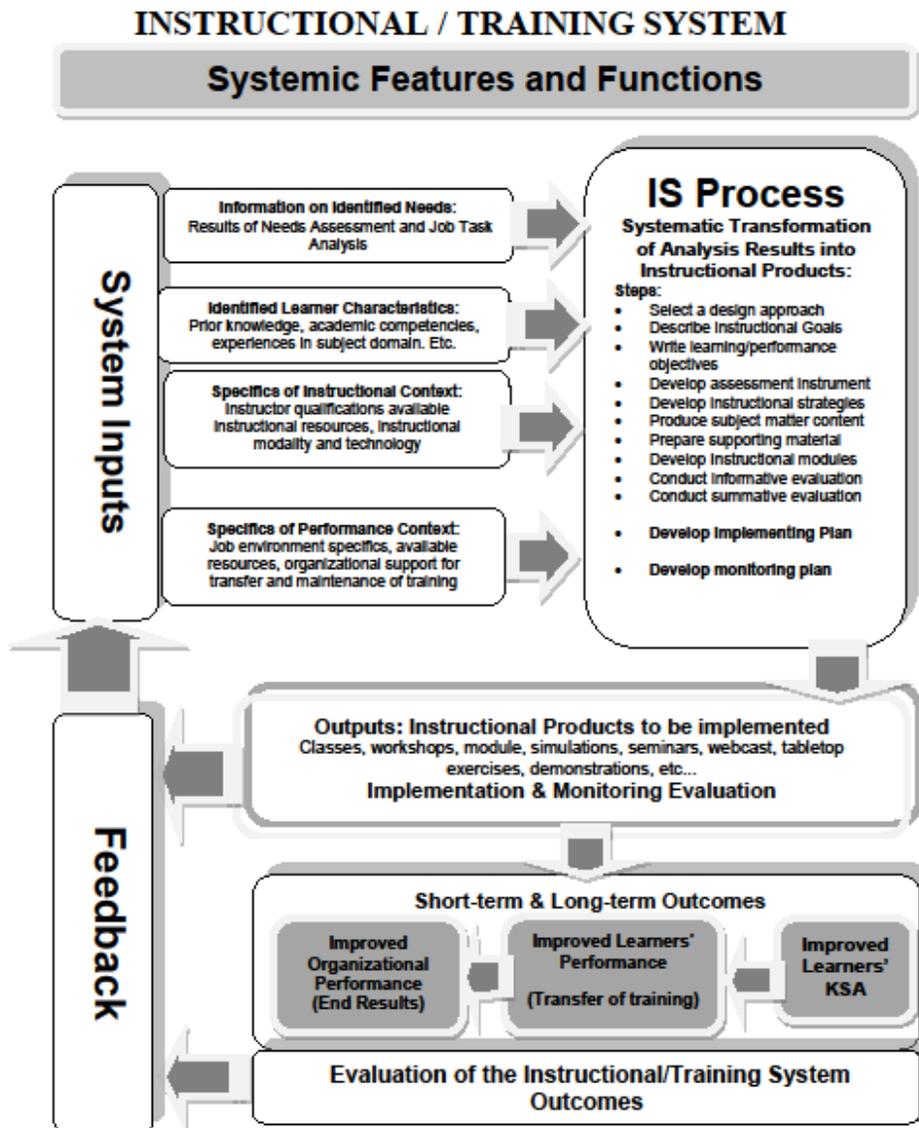
By

Devlin Peck

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Instructor

Aubteen Darabi

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1. Introduction

This document outlines my proposal to institute a training system for proposal writers at Digital Solutions LLC. While it is a graduate class assignment, I propose concrete, realistic solutions to a potential training problem. It demonstrates my ability to follow the instructional systems model (pictured on page 2) developed by Dr. Aubteen Darabi (2016) through his career of practical application. Generally, this model requires the practitioner to collect the system inputs by conducting research on the learners and relevant contexts; from there, the inputs are used to design the instruction and implementation plans. Once the materials are produced, they are delivered to the learners and the implementation is monitored. If successful, the instruction should result in a more knowledgeable, skilled employee and a more prosperous, successful organization. All feedback is then collected and returned to the system as inputs for future iterations.

One of the benefits of this model compared to others is that it is systemic and systematic, ensuring that the training program is comprehensive, responsive, and effective. It is systemic because it regards the training system in its entirety: a change in any of the components will initiate changes in the other components, and every component must be viewed in respect to the others. For example, if the system is not producing the expected outcomes, then the inputs, process, and implementation must be revisited for inaccuracies. If the inputs are inaccurate, the training output will not be relevant to the situation at hand and the desired outcomes will not occur. Furthermore, this approach is systematic because each step must occur in order. For example, if the instruction is designed before collecting the appropriate inputs, it will not be appropriate for the target population. Also, the implementation cannot occur until the instruction

is developed. Overall, this model ensures that each step is attended to and that the desired

learning and organizational outcomes are achieved.

INSTRUCTIONAL / TRAINING SYSTEM
Systemic Features and Functions

System Inputs

Information on Identified Needs:
Results of Needs Assessment and Job Task Analysis

Identified Learner Characteristics:
Prior knowledge, academic competencies, experiences in subject domain. Etc.

Specifics of Instructional Context:
Instructor qualifications available Instructional resources, instructional modality and technology

Specifics of Performance Context:
Job environment specifics, available resources, organizational support for transfer and maintenance of training

IS Process
Systematic Transformation of Analysis Results into Instructional Products:

Steps:
- Select a design approach
- Describe instructional Goals
- Write learning/performance objectives
- Develop assessment instrument
- Develop instructional strategies
- Produce subject matter content
- Prepare supporting material
- Develop instructional modules
- Conduct informative evaluation
- Conduct summative evaluation

- Develop implementing Plan

- Develop monitoring plan

Outputs: Instructional Products to be implemented
Classes, workshops, module, simulations, seminars, webcast, tabletop exercises, demonstrations, etc...
Implementation & Monitoring Evaluation

Feedback

Short-term & Long-term Outcomes

| Improved Organizational Performance (End Results) | Improved Learners' Performance (Transfer of training) | Improved Learners' KSA |

Evaluation of the Instructional/Training System Outcomes

2. Target Organization and Rationale

Digital Solutions is a fictitious company that provides software and technology services to various branches of the United States Government. They implement GIS systems, create web applications, and more. Due to the nature of their business model, all of their contracts are acquired through responding to government Request for Proposals (RFP). These documents are often 100-200 pages long with highly technical language and specifications. Because of this, the company hires proposal writers and proposal writer managers to ensure that the RFP responses are as compelling as possible. These employees interface with other departments, both internal and external, to compile the document and secure the government contracts. With Digital Solutions' recent expansion, there are dozens more contracts available than the current three proposal writers have time to respond to. The company is hiring 10 new proposal writers to ramp up their business and secure more government contracts.

Furthermore, 70% of Digital Solutions' employees work remotely. Remote teams use video conferencing applications, cloud-based storage platforms, and scheduling tools to collaborate. This makes it easier for the company to hire new employees as they are needed for new contracts, and it allows them to expand without the high overhead that accompanies physical workspaces. Because of this and Digital Solutions' success in managing remote employees, the 10 new proposal writing positions will also be remote.

However, without an appropriate training system, these new employees may not perform as expected; hiring more proposal writers does not automatically equate to securing more government contracts. This is especially true considering the differing backgrounds of the employees: Digital Solutions is hiring technical writers, grant writers, and others with experience on government projects to join the company as proposal writers. There needs to be an

instructional system in place that will train these employees on RFP response best practices at Digital Solutions. While the company does have a training team, it consists of one manager and five interns; they have eLearning for basic topics, such as how to use Google Apps or how to work effectively as a remote employee, but nobody on the training team has the experience or expertise to take on a project of this scale. Because of this, an executive at the company asked me to propose a system that addresses the training needs of the 10 new proposal writers, who will be joining the company in 8 weeks' time.

This proposal outlines my approach to developing an appropriate training system and ensuring that the new employees gain the necessary skills, knowledge, and attitudes; perform well on the job; and contribute to the overall organizational goals. Specifically, this system would train proposal writers to write compelling proposals in response to government RFPs.

3. System Inputs

Needs Assessment

In this case, we know that 10 new employees are joining Digital Solutions to write proposals for government contracts. To ensure that a training need exists, I propose to assess the resumes of these employees, and, if necessary, speak to them about their experience responding to government RFPs. However, as the new employees have diverse backgrounds and some do not have any experience writing proposals, their lack of knowledge, skills, and attitudes required for the job must be addressed. Once this training need has been verified, it is appropriate to collect the rest of the inputs and continue with the training system.

Job-Task Analysis

The job-task analysis will help us identify the training needs of the new employees. This method, championed by Robert Gagne, involves "[identifying] the component tasks of a final performance" (83). In other words, I will help elucidate the specific tasks that the proposal writers must perform to find success. More specifically, I propose to conduct a cognitive job-task analysis with the current successful proposal writers. This analysis will give us "a description of the performance objectives, equipment, conceptual knowledge, procedural knowledge, and performance standards used by experts as they perform a task" (Clark et al. 2).

To conduct the analysis, I will interview each of the three proposal writers that have been performing well with the company. I will ask them to state their primary duties as well as each task they must complete to perform that duty. With the list of tasks, I will ask the interviewee to rate, on a scale of 1-5, how difficult each task is to perform. I will also have them rate each task in terms of frequency and importance.

In addition to the interviews, I propose to observe the employees while they review an RFP and prepare a proposal. If I see any relevant behaviors or decisions that were not included in the task list, I will ask them what they did and why they did it. This will help elicit the thought processes behind each action; experts often will have developed automaticity in their topic and will not think to explain each step. This observation period ensures that each step is accounted for and all relevant data is collected. The data from this job-task analysis will be essential during the process phase of the instructional system (discussed further in section 4), as it will ensure I design training and job aids for the appropriate skills, knowledge, and abilities.

Learner Analysis

Before designing any training, it is necessary to collect information about the learners. I propose to host a focus group interview with three of the new employees, as well as send a questionnaire to each new hire. During the focus group, I will ask the learners about their previous work experience and their expectations for this new position. On the questionnaires, each of the new hires will be able to state their preferred mode of education (face-to-face, eLearning, self-guided print material), their level of experience with proposal writing, their comfort with technology, and demographic information (age, gender, etc.).

This information will ensure that the instruction is tailored to the learner's needs and past experiences. If the learners are all already knowledgeable about a specific subtopic, we do not need to spend time and money training them on that topic. Furthermore, if the learners all struggle with technology, we will not want to present the training as eLearning. This analysis will give us the information we need to design tailored, targeted instruction.

Instructional Context

Examining the instructional context will let us know what is and is not possible when training the new employees. Depending on the learner analysis, the instruction will either be delivered online, face-to-face, or via printed handouts. If it will be delivered online, I will collect information about the computers and internet bandwidth that the learners have access to. If delivered face-to-face, I will examine the rooms in which the instruction will be delivered. I will attend to the technology and space available in the room; this information will ensure that the instruction is suited to the environment in which it is delivered.

Supposing the instruction is delivered in a face-to-face or virtual face-to-face environment, I would suggest that the proposal writer manager to lead the training for the new employees. This would help the manager build rapport with the new proposal writers throughout the training process, and the manager is also knowledgeable about writing RFP responses. Furthermore, she can incorporate previous experiences to contextualize the experience or respond to learner questions. It is also important to note that while this is my current recommendation, it could change once the inputs are collected and analyzed.

Performance Context

Finally, I propose to collect information on the performance context. I will look at the environment in which the employees are expected to examine the RFPs and write their responses. This will show me what resources they have available to them, and, more importantly, it will help me design instruction that mimics the real-life performance setting. By keeping the context similar between instructional and performance contexts, it will help the learner retain the information and perform better once on the job. Seeing the performance context will also inform our decision when designing job aids or checklists for the employees to access while they are working.

Overall, it is essential to collect these inputs before initiating the instructional design process. Without this information, the instruction would be designed for nondescript learners in nondescript settings. In other words, success would be random and unlikely. Collecting these

inputs ensures that the instruction is relevant and effective, and it greatly increases the likelihood that the desired outcomes will be attained.

4. System Process

During the process stage, I propose to transform the inputs into instructional outputs: this includes the instructional materials, implementation plan, and monitoring plan. With the current information we have about the learners and contexts, I propose to institute a blend of virtual instructor-led training (ILT) and self-guided eLearning. The company hosts its current training on Moodle LMS, so the eLearning will integrate into the existing platform. However, since the performance of the new proposal writers is critical for the business's future success, incorporating virtual ILT will provide the learners a real-time mentor that can answer questions, lead activities, provide feedback, and evaluate assignments.

Also, since the new hires will not be onboarded for another two months, the traditional ADDIE model of instructional design will be appropriate. This model is linear and ensures that each step of systematic instructional design is addressed: first, I collect the learner inputs and analyze them. With that information, I design the instruction while working with SMEs and existing content, and then I develop the facilitator materials and eLearning. From there, I propose to conduct a formative and summative evaluation before delivering the instruction to the learners. This careful design model ensures that the instruction is effective, tested, and relevant to the learners.

Specifically for the instructional design, I propose to transform the inputs into instructional objectives, subject matter content, and supporting materials. I would do this as follows:

Instructional Objectives

To develop the instructional objectives for each module, I would draw upon the results from the job-task analysis. I would identify the key duties to train by following the method outlined by Rothwell et al. (2016), where he suggests establishing the instructional purpose (in our case, increased learner knowledge and skills), classifying learning tasks, and analyzing learning tasks (p. 130). This would result in a list that states the work tasks, their classifications (knowledge, feeling, or skill), and an analysis of the requisite prior knowledge to perform each task. From here, I would draw the instructional modules from the duties and the performance objectives from the tasks required to complete the duties. This ensures that, upon successful completion of the program, the learners will be able to perform the same duties and tasks that the successful proposal writers currently perform. Some expected duties of the proposal writers are "Interpret an RFP," "Write a response to the RFP," and "Collaborate with the contracts team." However, the job-task analysis will define these more carefully and lead to our specific modules and instructional objectives.

Furthermore, to guarantee alignment between the objectives and assessment, it is necessary that the objectives are measurable. Instead of stating that the learners will be able to "Understand each section of an RFP," I would state that the learners will be able to "State what each section of the RFP requires" or "Differentiate between the different sections of an RFP."

When it comes time to assess this objective, I will design questions that can target whether or not the learner achieved the objective.

Subject Matter Content

To develop the content itself, I would draw upon the results of the job-task analysis, learner analysis, instructional context, and performance context. All of the inputs are necessary when designing content: not only does this ensure that we are training the correct knowledge and skills, but it ensures that we are using the resources we have available to us, targeting the learner's current knowledge and attitudes, and designing to enhance transfer to the performance context.

With these inputs defined, I propose to work with the current proposal writers to design the content. If training materials or documentation already exists, I will also use that to aid my instructional design. Furthermore, I will look at examples of prior successful RFP responses and ask the proposal writers any additional questions about the tasks and duties that they must complete to perform their jobs successfully. With the content designed for each objective, I will hold SME reviews and have the proposal writers look over the content for inaccuracies or gaps. This will also serve as the formative evaluation for each objective.

Additionally, I propose to address all four forms of knowledge: facts, concepts, procedures, and rules. If any of these are missing, the learners will not have the requisite knowledge required to perform their duties as instructional designers. More importantly, I will be sure to scaffold the information so that it builds from facts up through rules. If the learner is presented with procedures, such as the order in which to read an RFP, before understanding the

concepts, such as what an RFP is or why we would respond to it, then the information will not be meaningful or memorable.

Supporting Materials

To support the new hires in their roles, I will also design checklists and job aids. To ensure that they are useful, I will ask the current proposal writers what resources they most often use when drafting their responses. This information, combined with the results from the job-task analysis and performance context analysis, will allow me to develop just-in-time resources that assist the learners in their time of need. We would introduce these materials during training, and they would continue to help the learner when they transition from training to on-the-job performance.

Furthermore, to design the learning experience, I propose that we incorporate the following instructional strategies throughout the training. This list is not exhaustive, and the recommendations may change after collecting the inputs.

Case Studies

Case studies of past proposals, both successful and unsuccessful, will introduce students to best and worst proposal-writing practices. The positive case studies can also be discussed to generate motivation and interest in the training; if the learners see their roles in securing

multimillion dollar contracts, it would gain their attention and motivate them to gain the necessary skills and knowledge to perform well.

Guided Practice

Guided practice can be incorporated during the virtual ILT; the instructor can introduce a new section of the RFP, then the new hires can spend time, either individually or in groups, interpreting that section and hypothesizing how it will affect their proposal. Furthermore, this tactic can be used once it is time to draft the responses. The instructor can give the learners sample prompts or requirements, then the learners can draft pieces of their response accordingly. This would be followed by discussion and feedback.

Workshops

Learner workshops would be integrated as part of the virtual ILT. I recommend these workshops for when the learners start drafting parts of RFP responses. They would be given a prompt, then draft part of a response, then workshop their responses with their peers to receive feedback and help one another. This peer-to-peer feedback will show the new hires where they are excelling and where they need to devote additional effort and attention.

Sequencing

To sequence the instruction, I propose to use the critical sequence technique; this method prescribes that the information will be presented in order from most important to least important.

This is appropriate because it would mirror the way that the proposal writers interact with the RFP; as some sections are much more relevant to the proposal writers than others, the instruction would work through the sections from most important to least important for drafting a response. Additionally, the training will begin with learning how to interpret an RFP, then it will move to drafting and finalizing the response. It is essential that the learners understand the RFP requirements before beginning to write a proposal, and presenting the instruction in this way will reinforce this concept.

Assessment

The primary assessment for this training system would be whether or not the new hires can draft an RFP response to a given sample RFP. For the individual eLearning modules, students will have multiple choice questions to assess whether or not they achieved the lower-level objectives. In the virtual ILT, the facilitator will ask the students questions and have them articulate what they are learning in their own words. Therefore, verbal assessment and multiple-choice questions will lead up to the final training assessment, which requires the learner to write a proposal in response to a sample RFP. The facilitator will then evaluate these responses to assess whether the overall learning objectives have been achieved by each student.

Evaluation

Finally, I propose to conduct formative for each instructional module. As I mentioned earlier, I would conduct formative evaluation by asking the current proposal writers to review the content that I develop for every module. Based off of their feedback, I would make the appropriate

changes to improve the instruction. Once the modules are developed, I would bring the materials

to the proposal writer manager and ask her to review them for the summative assessment. This

would give her a chance to analyze the materials for breadth, depth, and accuracy, and she would

also evaluate the instructional activities. With her approval, the instruction would be ready for

implementation.

5. System Outputs

By the end of the process phase, I would have four expected outputs:

Virtual ILT Materials

These materials will include a facilitator guide for the proposal writer manager to lead the ILT,

PowerPoint slides to accompany the ILT, and job aids to assist the learners with the experience.

eLearning

The self-guided eLearning will be used to supplement the virtual ILT. It will include technical

and procedural information about responding to government RFPs, and the learners will be able

to discuss and practice what they learn from the eLearning during the virtual ILT.

Implementation Plan

This plan would state how the eLearning and virtual ILT should be delivered to the learners. It includes a timeline and guide for when and how each lesson should be delivered.

Monitoring Plan

The monitoring plan ensures program fidelity. It would state how the implementation should be monitored and, if necessary, modified accordingly.

Therefore, once these outputs are developed, the facilitator materials and schedule from the implementation plan would be delivered to the facilitator. She would then use this to host the virtual ILT and direct students to complete the eLearning modules when appropriate. During the time the students are working on eLearning in four-hour blocks, the proposal writer manager would attend to her other duties. I expect the program to be 60% eLearning and 40% virtual ILT, but, again, this information could change once the actual analysis is completed.

To deliver the eLearning, I would work with the current Digital Solutions LMS administrators to upload the modules to Moodle LMS. They already have systems in place to track training completion for each employee and send the employee's supervisors a weekly report on the employee's progress. They would send these training completion reports to the proposal writer manager, and the manager would address any incomplete trainings with the new hires to ensure that they are finished on time. The facilitator would also tell the students when they should be working on the eLearning and what modules they should be working on.

To monitor this process and ensure that the program is implemented as planned, the proposal writer manager would deliver a progress report to her supervisor on a weekly basis. Furthermore, an intern from the training team would observe every virtual ILT session and note whether it is following the schedule. If the training falls behind schedule or any modules are skipped, it would be brought to the facilitator's attention by either her supervisor or a training intern, and the system would be adapted accordingly; some modules may need to be sped up or they may need to spend less time on group activities, for example.

6. System Outcomes and Outcome Evaluation

In the human performance technology context, a training system is developed with three primary outcomes in mind; these outcomes are as follows, and I outline how I propose to evaluate each of them:

Improved Employee Knowledge, Skills, or Attitudes (KSA)

This is the first expected outcome of the training system. If successful, the employee will have knowledge, skills, or attitudes that he or she did not have previously. It is also the most intuitive outcome considering the nature of training; it is developed to solve a gap in knowledge, skill, or attitude. To evaluate this outcome and ensure that it has been achieved, we would assess the final RFP response that the new hires produce at the end of the training. If it is well-written, compelling, and aligned with all of the RFP's requirements, then we would know that the learners gained KSAs that they did not have before; this is true because many of the new hires will not have had any experience before writing RFPs, and we will know after the needs

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assessment whether or not the learners are capable of this when they are hired. Furthermore, the success on the multiple-choice questions at the end of the eLearning modules will be further evidence of improved learner knowledge.

Improved Employee Performance

The improved learner KSAs are expected to lead to improved performance on the job. To ensure that this happens, the new proposal writers will have to perform many tasks during training (interpreting RFPs, drafting RFP responses, collaborating with peers) that they will have to perform once on the job. No matter how much smarter or more skilled the employees are, it will not matter unless they are actually performing as expected. To evaluate this, I propose that we monitor their performance once they are on the job. We should attend to whether the employee completes RFP responses on time, how many errors exist in their proposal, and how many contracts they are successfully awarded. Furthermore, annual performance reviews and supervisor reports can be used to monitor the employee performance as well.

Enhanced Organizational Performance

Finally, the most significant outcome of the training system is enhanced organizational performance. This ensures that the organization as a whole benefits from the training program; in our case, this would mean additional income for the organization through a higher number of contracts awarded. Additionally, we could evaluate this outcome by surveying government employees and grant providers about their satisfaction with Digital Solutions and their

conceptions about the quality of work Digital Solutions provides. This is the final and highest-level outcome of this proposed training system.

7. Provisioned Feedback Loop

As the training is being implemented and delivered, the learners and facilitator will have opportunities to provide feedback on the courses and their experiences. After each eLearning module, the learners will have a chance to evaluate the course and provide feedback. This feedback will be about how satisfied they were with the course, whether they feel confident that they can apply what they have learned, how likely they are to recommend the course to a peer, and how relevant they thought the course was to their job. This information will be housed on the Moodle site, and the future designers and developers would be able to modify the courses based off of the feedback for the next cohort of proposal writers.

Additionally, the learners and facilitator would provide feedback on the virtual ILT at the conclusion of the instructional program. They would provide this feedback on a Google Form or other questionnaire; consequently, the feedback on the virtual ILT and eLearning will return to the system as inputs when it is time for the content to be revised for the next cohort. This ensures that the system is continuously improving and that it does not become irrelevant. This would continue for future iterations of the training system, and it would ensure that the system is always responding to changes in the learners, performance contexts, instructional contexts, and learner experiences.

8. Conclusion

Overall, this proposal outlines my approach to develop a training system that would help Digital Solutions prosper through enhanced proposal writer KSAs and on-the-job performance. It allowed me to approach the training issue systemically and systematically, using my knowledge of human performance technology, systems thinking, and performance improvement to posit a tailored, effective solution. While much of the proposal could change based off of the real results of the learner analysis, instructional context analysis, performance context analysis, and needs assessment, this proposal outlines what my approach would be with the information that I already have. In a real-world scenario, I would work with management and other stakeholders to discuss each step in the proposal to develop a final plan of action. However, this experience allowed me to implement my systems knowledge to a high degree and I am prepared to do so again if an organization requires me to do so.

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