

Assignment 6 – Applying IT to Your Professional Context

Mark Rash | markrash@vt.edu | March 11, 2011

Part 1

Additions/changes are in red text

IT Need	Time	Space	Who/What	Authenticity
Instructional design	The specific length of time is highly dependent on the subject matter, audience, organizational expectations, and overall workload. I need to perform at least part of the instructional design process on a daily basis. Although most of the design is done early during a given project, the iterative nature of instructional design & development requires that it be revisited throughout the project.	My office at work, my home office, the corporate facility (only as needed for certain projects), the call center, managers' offices (for certain projects), co-worker's desks	I am generally the primary instructional designer / developer on my projects, although I sometimes collaborate with other instructional designers on large projects. I also partner with the Business Training Specialist (liaison between instructional design and the customers). I am accountable to the learners, the project sponsors (business organization), my manager, and the Business Training Specialist.	This must be done in the real environment, using the real instructional design process. It can contain simulated learning solutions when they are appropriate, but the instructional design process itself must be authentic for the instruction to be meaningful and effective. It is possible, in limited circumstances in my organization, to simulate this process by identifying complete existing instructional products and closely evaluating their instructional effectiveness and feasibility. If an existing solution is found, it could greatly reduce the need for creation of a new instructional design project.

IT Need	Time	Space	Who/What	Authenticity
Identifying needs	The exact length of time depends on the subject matter and expectations of the organization. On some projects, the organization specifies the needs, thus limited needs analysis is warranted. On other projects, a period of anywhere from a day to a week can be used to determine exactly what the audience and organization need.	My office at work, managers' and sponsors' offices, the call center	While I am often involved in determining the needs, they are generally prescribed by the project sponsors. Therefore, this may involve me, but most likely will involve the business lead, project sponsor, and Business Training Specialist to a greater extent.	To ensure the instruction will address the correct areas, the identification of needs must be real. Sometimes, however, the needs will be predetermined by the business or otherwise generally known, thus permitting a simulated identification of needs without requiring my physical presence.
Converting needs into instructional goals	While the timing varies depending on the complexity of the subject matter, this is done early in the design process. It involves determining at a high level what I need (and the organization expects) my learners to get out of the project. This takes less than a day on most projects, depending on how quickly the business approves.	My office at work, my home office	I generally partner with the Business Training Specialist to convert the identified business need(s) into instructional goals. We work with the business lead for validation.	This must be real; otherwise the instruction may end up being more of an information dump or communication without seeking to improve performance through behavior change. It also must be real to ensure instruction is the proper solution.

IT Need	Time	Space	Who/What	Authenticity
Analyzing learners	This is done early in the design process after the instructional goal is established. Most of my projects involve different sub-sets of the same overall audience, making this a relatively short process. It primarily involves determining the entry skills required of and exhibited by the learners. This generally takes less than a day.	My office at work, the call center (performance environment), the associates' and managers' desks, the corporate facility (only as needed)	I am generally responsible for this task on most of my projects; however I also work with the supervisor(s) and/or manager(s) of the target audience to validate the analysis. I also collaborate with the Business Training Specialist to ensure we align.	The analysis must be authentic to ensure the instruction is designed and developed in a way that is meaningful to and appropriate for the learners. Generally my audience is the same, therefore this can be simulated in the sense that previous analyses can be replicated and I can have virtual discussions with the audience and their managers without requiring my physical presence.
Analyzing learning and performance contexts	The learning context is typically the same for all of my projects, since most of my work involves call center associates trained in the training room or taking e-learning at their desks – thus this takes a minimal amount of time. The performance context varies in terms of the specific department(s) that may be involved, therefore this can take anywhere from half a day to a day to understand the environment in which the goal will be performed. This is generally done in conjunction with creating the high level design and analyzing learners.	The call center (performance environment), the associates' and/or managers' desks, the corporate facility (only as needed)	I collaborate with the manager(s) of the target audience on determining the context in which the new skills will be used. I can also meet with learners to evaluate their performance environment and with call center trainers to analyze the training environment.	This analysis must be authentic to ensure the context is properly understood. The learning context should simulate the performance context as closely as possible. Since the learning environment does not change in the call centers, authenticity is less important for meeting this need, as it is possible to simply utilize previous analyses. Analyzing the performance context can also be done through conversations with management without requiring my physical presence in the performance environment.

IT Need	Time	Space	Who/What	Authenticity
<p>Creating high-level design documents</p>	<p>On most projects, the high-level design takes about 1-2 days to create, although it can take as many as 4 days on large projects with less familiar subject matter. This is finalized as the learner and environment analyses are completed.</p>	<p>My office at work, my home office, my co-worker's desks (for collaboration)</p>	<p>I am responsible for completing the high-level design on most of my projects, although I collaborate with teammates on larger projects. I am accountable to the Business Training Specialist, my manager, and my customers.</p>	<p>An authentic high-level design is required to ensure the proposed training solution aligns with the vision of the business. This sets the stage for further design and all development, so this must be authentic. Portions of the document itself can be simulated in the sense that the document must report to business sponsors some of the key principles of adult learning and the training organization's approach, which can be replicated from previous documents.</p>
<p>Obtaining approval on high-level designs</p>	<p>The approval process usually takes 2-3 days, depending on the workload of the project sponsor and subject matter experts. This is done after the high-level design has been reviewed by the Business Training Specialist.</p>	<p>My office at work, the project sponsor's office, the Business Training Specialist's desk</p>	<p>I generally send the high-level design report electronically to the Business Training Specialist. We meet to discuss and finalize the design. The Business Training Specialist then passes the design to the sponsor and waits for approval.</p>	<p>The approval itself must be authentic or the entire project could be jeopardized; however, the approval can be virtual (e.g. using email or instant message) and doesn't require a physical meeting.</p>

IT Need	Time	Space	Who/What	Authenticity
Creating detailed design documents	Once the high-level design is approved, I expand upon it by breaking down the goal into the various steps and components involved. This process usually takes 4-5 days, depending on the complexity of the content.	My office at work, my home office	I am responsible for expanding on the approved high-level design by filling in the detail that will serve as the roadmap for the development process. I am accountable to my customers, my manager, and the Business Training Specialist.	Real design documents are required. A simulation can only be used in the form of a storyboard or e-learning sample – beyond that, authenticity is required to lead to a successful development. If a particular project does not allow resources for creating a detailed design, it is possible to pull parts from previous designs, as long as valid instructional objectives are written for the new project.
Creating instructional strategy	As part of the detailed-level design, the instructional strategy captures the recommended approach for instruction, implementation, and evaluation. Since most training needs are prescribed by the organization and dependent upon the availability of resources (trainers, classrooms, etc), this is a relatively quick process, typically taking less than a day.	My office at work, my home office	I am responsible for creating the instructional strategy based on the approved design. I am accountable to my customers, my manager, and the Business Training Specialist.	The instructional strategy must be authentic. However, it is not necessary to create the strategy from scratch every time a new project begins. It is possible to reuse prior strategies that worked well for similar learners and content areas.

IT Need	Time	Space	Who/What	Authenticity
Writing performance objectives	As part of the detailed-level design, this step produces the specific, measurable objectives that will be included in the learning solution. This process usually takes half a day to a day, depending on the complexity of the content.	My office at work, my home office	I am responsible for writing learning objectives. I am accountable to my customers, my manager, and the Business Training Specialist. I may contact the business lead or subject matter expert for validation of performance objectives.	Performance objectives must be authentic, as these specify how we know the instructional goal has been achieved. While the objectives must be documented as part of the design so that they properly guide the entire process, there are ways to introduce them to the learners without boring the audience with instructional design lingo.
Creating assessment instruments	I create assessment instruments once the performance objectives are finalized. Often the business prescribes a knowledge check or a multiple choice quiz, in which case this takes half a day to a day. Other times I am able to create more effective instruments, such as behavioral assessments in the classroom, evaluation checklists, and online simulations. In this case, it may take 1-2 days, including time for review by the business training specialist and/or sponsor.	My office at work, my home office	I am responsible for creating assessment instruments that measure the performance objectives. I am accountable to my customers, my manager, and the Business Training Specialist. I may work with the business lead, subject matter expert, and/or Business Training Specialist on determining how to create authentic assessments.	The assessment itself must be authentic; however it can involve a simulated experience (such as an online assessment activity for systems training, or an evaluated role-play activity).

IT Need	Time	Space	Who/What	Authenticity
Instructional development	The length of time is highly dependent on the complexity of the content and availability of any existing materials. This process generally takes anywhere from 3 to 4 weeks, although it can be 5-6 weeks or more on complex projects.	My office at work, my home office	I am generally responsible for developing training that I design, although I occasionally hand off the design to the actual development team for support or completion, depending on workload and requirements. I am accountable to my customers, the project sponsor(s), my manager, and the Business Training Specialist.	The development must be authentic. It can consist of simulated components as appropriate, but the development itself must be authentic. The development can be simulated in the sense that existing materials can be leveraged in their existing form or modified for a new instructional situation.
Selecting and developing instructional materials	The length of time is highly dependent on the complexity of the content and availability of any existing materials. This process generally takes anywhere from 3 to 4 weeks, although it can be 5-6 weeks or more on complex projects.	My office at work, my home office, the Business Training Specialist's desk, the Business Training Manager's office	I am responsible for developing instructional materials for my projects, except when the project (all or in part) is handed off to the development team. When selecting existing materials, I collaborate with the Business Training Specialist and/or the Business Training Manager. I am accountable to my customers, the project sponsor(s), my manager, and the Business Training Specialist.	The development must be authentic, as instructional materials of some kind are required, whether they be guides for the instructor, participant, e-learning, etc. Not all projects require brand new development; in those situations, this need can be met by reproducing existing materials in their existing form or modifying them to fit the new instructional situation.

IT Need	Time	Space	Who/What	Authenticity
Graphic design	On most projects, existing graphics assets are sufficient, leaving this process to more of a selection and/or modification of existing graphics than a creation of new ones. For most projects, this takes no more than a day, generally half a day or less. On larger projects or situations that have a greater need for graphic design, I employ the help of the communications department.	My office at work, my home office, the Communications Dept desks	I am responsible for the message design, following sound principles. I am also responsible for identifying and using existing graphics assets as applicable. On large projects or when the need arises, I may collaborate with the Communications Dept, which includes a few graphic designers.	There is flexibility in this area. The message design itself has to be authentic, in that it must follow the principles of proper design and communication. The graphics themselves will be depictions of reality – thus they will be simulated in that sense. It is also possible to reproduce existing graphics with or without modification to fit the present scenario.
Adding courses to the catalog	Both e-learning and facilitated courses must be housed in the Learning Management System (LMS). The length of time depends on whether the course is instructor-led or self-paced. It takes less than half an hour to add a facilitated course to the catalog. It can take anywhere from 1-2 hours to perform all of the actions required to enable access and use of an e-learning course in the LMS.	My office at work	I am responsible for loading my courses to the LMS. If I run into technical issues that I'm unable to resolve, I may work with IT or the LMS vendor.	This must be authentic in order for learners to be able to access the learning solutions they need or are required to take. My organization requires that all training be housed in the catalog and this is the only acceptable way for it to be accessed by learners and instructors.

IT Need	Time	Space	Who/What	Authenticity
Evaluating instructional effectiveness	Time varies depending on which Kirkpatrick's level the effectiveness is to be measured and the degree to which performance needed to change as a result of instruction. Unfortunately many projects result in only a Level 1 evaluation, which takes less than half an hour to customize from the approved template. When given the ability or requirement to determine instructional effectiveness in terms of knowledge transfer and business results, the process is done in conjunction with others (supervisors, managers, business training specialist, etc) and can continue for several weeks after instruction has occurred.	My office at work, the sponsor's office, the Business Training Specialist's desk, managers' and supervisor's desks (for more extensive evaluations)	I am responsible for ensuring Level 1 evaluations are included in my learning solutions. For higher level evaluations, I work with the sponsor and the Business Training Specialist to evaluate instructional effectiveness. For more advanced evaluations, we may also collaborate with the learners' managers and supervisors to determine if transfer has occurred and how the business is being impacted.	The evaluation must be authentic in order to determine the effectiveness of the instruction. It is possible, however, to reuse previous evaluation strategies, methods, and instruments and apply them to the current scenario. I also do not necessarily need to be face-to-face with the instructional situation to evaluate effectiveness – this can be done through the use of evaluation instruments and methods.
Creating or modifying evaluation instruments	Our organization has adopted standard evaluation instruments, requiring only limited customization for each project. When time allows on a project or a sponsor requires it, additional evaluation instruments can be created. This normally takes less than half a day for each project and is done in conjunction with the Organizational Development department.	My office at work, the Organizational Development team's desks	I am responsible for creating / modifying evaluation instruments for Level 1 evaluations. For higher level evaluations, I may work with the Organizational Development team to create or modify appropriate instruments. I am accountable to my manager, my customers, the project sponsors, and the business lead.	The evaluation instruments must be authentic in order to capture the information needed to determine the effectiveness of instruction. Often it is perfectly acceptable to replicate previous evaluation instruments and use them in new projects with little or no modification.

IT Need	Time	Space	Who/What	Authenticity
Deploying instruments	For facilitated instruction, instruments are delivered in class, requiring little or no time from me. For e-learning instruction, I may deploy an instrument within the course or as a follow-up communication, both of which would involve linking to an online survey. This takes less than half an hour in both cases. For more complex evaluations, I work with the communications and change management groups to prepare them for deploying the instruments, which generally takes 1-2 hours.	My office at work, the call center environment (associates' desks and the training rooms)	I am responsible for including evaluation instruments in the instruction that I develop. When co-developing instruction, other team members may be responsible for deploying instruments. For behavioral assessments, I may work with the Communications Dept and Change Management team to ensure they have what they need to deploy the evaluation.	Deployment of instruments must be authentic in order to properly evaluate instructional effectiveness. They can involve paper-based or online instruments, but they must be authentic in order to be useful. This generally does not require my physical presence, however, as the instructor can deploy in the classroom and online surveys are done virtually.
Evaluating results	Our organizational structure is such that the results are generally reviewed by the business training specialist and then shared with the design / development team. We generally collaborate on the results, lessons learned, and next steps, which typically takes 1-2 hours, depending on the project.	My office at work, Business Training Specialist's desk	I work with the Business Training Specialist to evaluate and interpret results. I am accountable to my customers, my manager, and the Business Training Specialist.	Evaluation of the results must be authentic in order for them to be useful for improving instruction. For online evaluations, analyzing the results can be done by viewing graphs and tables that describe the data visually.
Using evaluation results to improve instruction	On projects in which we have the luxury of using evaluation results to improve instruction, the process usually takes 2-3 days. The exact timing depends on the complexity of the project, the results of the evaluation, and the amount of time available.	My office at work, my home office, the call center, Business Training Specialist's desk	I am responsible for using evaluation results to improve the instruction, as long as time and resources allow it. I may collaborate with the Business Training Specialist to document lessons learned and determine next steps. I may revisit the call center (performance environment and/or training rooms) to determine how the instructional strategy may need to be improved.	This must be authentic if the evaluation is to have the intended impact. The results of the evaluation need to be used to determine how the instruction can be improved.

Part 2

IT Need	Time	Space	Who/What	Authenticity	Technology
Instructional design	The specific length of time is highly dependent on the subject matter, audience, organizational expectations, and overall workload. I need to perform at least part of the instructional design process on a daily basis. Although most of the design is done early during a given project, the iterative nature of instructional design & development requires that it be revisited throughout the project.	My office at work, my home office, the corporate facility (only as needed for certain projects), the call center, managers' offices (for certain projects), co-worker's desks	I am generally the primary instructional designer / developer on my projects, although I sometimes collaborate with other instructional designers on large projects. I also partner with the Business Training Specialist (liaison between instructional design and the customers). I am accountable to the learners, the project sponsors (business organization), my manager, and the Business Training Specialist.	This must be done in the real environment, using the real instructional design process. It can contain simulated learning solutions when they are appropriate, but the instructional design process itself must be authentic for the instruction to be meaningful and effective. It is possible, in limited circumstances in my organization, to simulate this process by identifying complete existing instructional products and closely evaluating their instructional effectiveness and feasibility. If an existing solution is found, it could greatly reduce the need for creation of a new instructional design project.	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology) • Microsoft Word • Microsoft PowerPoint • Formatting Solutions Pro • Online collaborative tools for working with the team on instructional design projects, all or in part • Reusable Learning Objects, so that instructional solutions are modular and part of the instructional design process can involve planning use of these objects instead of designing new ones

IT Need	Time	Space	Who/What	Authenticity	Technology
Identifying needs	The exact length of time depends on the subject matter and expectations of the organization. On some projects, the organization specifies the needs, thus limited needs analysis is warranted. On other projects, a period of anywhere from a day to a week can be used to determine exactly what the audience and organization need.	My office at work, managers' and sponsors' offices, the call center	While I am often involved in determining the needs, they are generally prescribed by the project sponsors. Therefore, this may involve me, but most likely will involve the business lead, project sponsor, and Business Training Specialist to a greater extent.	To ensure the instruction will address the correct areas, the identification of needs must be real. Sometimes, however, the needs will be predetermined by the business or otherwise generally known, thus permitting a simulated identification of needs without requiring my physical presence.	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology), especially needs analysis • Microsoft Word (for documenting needs) • Computer • I would like to have an online request form that allows the sponsor requesting the project to clearly submit specific details about the needs, rather than a generic request for training.

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Converting needs into instructional goals</p>	<p>While the timing varies depending on the complexity of the subject matter, this is done early in the design process. It involves determining at a high level what I need (and the organization expects) my learners to get out of the project. This takes less than a day on most projects, depending on how quickly the business approves.</p>	<p>My office at work, my home office</p>	<p>I generally partner with the Business Training Specialist to convert the identified business need(s) into instructional goals. We work with the business lead for validation.</p>	<p>This must be real; otherwise the instruction may end up being more of an information dump or communication without seeking to improve performance through behavior change. It also must be real to ensure instruction is the proper solution.</p>	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology, especially needs analysis) • Microsoft Word (for documenting & sharing instructional goals) • Computer • If the online request form (suggested above) guided the sponsor into indicating at a high level what the learners should be able to do after taking the training, it would assist with meeting this need.

IT Need	Time	Space	Who/What	Authenticity	Technology
Analyzing learners	This is done early in the design process after the instructional goal is established. Most of my projects involve different sub-sets of the same overall audience, making this a relatively short process. It primarily involves determining the entry skills required of and exhibited by the learners. This generally takes less than a day.	My office at work, the call center (performance environment), the associates' and managers' desks, the corporate facility (only as needed)	I am generally responsible for this task on most of my projects; however I also work with the supervisor(s) and/or manager(s) of the target audience to validate the analysis. I also collaborate with the Business Training Specialist to ensure we align.	The analysis must be authentic to ensure the instruction is designed and developed in a way that is meaningful to and appropriate for the learners. Generally my audience is the same, therefore this can be simulated in the sense that previous analyses can be replicated and I can have virtual discussions with the audience and their managers without requiring my physical presence.	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology, especially learner analysis) • Microsoft Word (for documenting & sharing results of the learner analysis) • Computer • Instant messaging software (to meet with managers virtually) • Monitoring software similar to what is used by management for Quality Assurance; could be used by Training for analyzing learners

IT Need	Time	Space	Who/What	Authenticity	Technology
Analyzing learning and performance contexts	The learning context is typically the same for all of my projects, since most of my work involves call center associates trained in the training room or taking e-learning at their desks – thus this takes a minimal amount of time. The performance context varies in terms of the specific department(s) that may be involved, therefore this can take anywhere from half a day to a day to understand the environment in which the goal will be performed. This is generally done in conjunction with creating the high level design and analyzing learners.	The call center (performance environment), the associates' and/or managers' desks, the corporate facility (only as needed)	I collaborate with the manager(s) of the target audience on determining the context in which the new skills will be used. I can also meet with learners to evaluate their performance environment and with call center trainers to analyze the training environment.	This analysis must be authentic to ensure the context is properly understood. The learning context should simulate the performance context as closely as possible. Since the learning environment does not change in the call centers, authenticity is less important for meeting this need, as it is possible to simply utilize previous analyses. Analyzing the performance context can also be done through conversations with management without requiring my physical presence in the performance environment.	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology; especially in terms of context analysis) • Microsoft Word (for documenting & sharing results of context analysis) • Phone (for teleconferences to discuss remote learners) • Instant messaging (for communicating with management) • Computer • Documentation of prior audience analyses to prevent the need to reanalyze for every project

IT Need	Time	Space	Who/What	Authenticity	Technology
Creating high-level design documents	On most projects, the high-level design takes about 1-2 days to create, although it can take as many as 4 days on large projects with less familiar subject matter. This is finalized as the learner and environment analyses are completed.	My office at work, my home office, my co-worker's desks (for collaboration)	I am responsible for completing the high-level design on most of my projects, although I collaborate with teammates on larger projects. I am accountable to the Business Training Specialist, my manager, and my customers.	An authentic high-level design is required to ensure the proposed training solution aligns with the vision of the business. This sets the stage for further design and all development, so this must be authentic. Portions of the document itself can be simulated in the sense that the document must report to business sponsors some of the key principles of adult learning and the training organization's approach, which can be replicated from previous documents.	<ul style="list-style-type: none"> • The Instructional Design process itself (as a technology) • Microsoft Word (for creating the document) • Formatting Solutions Pro (for formatting the document) • Computer • Perhaps some sort of online tool that captures the necessary information, stores it in a database, and flows through approvals as needed • Google Docs or Microsoft Office Online for easy collaboration
Obtaining approval on high-level designs	The approval process usually takes 2-3 days, depending on the workload of the project sponsor and subject matter experts. This is done after the high-level design has been reviewed by the Business Training Specialist.	My office at work, the project sponsor's office, the Business Training Specialist's desk	I generally send the high-level design report electronically to the Business Training Specialist. We meet to discuss and finalize the design. The Business Training Specialist then passes the design to the sponsor and waits for approval.	The approval itself must be authentic or the entire project could be jeopardized; however, the approval can be virtual (e.g. using email or instant message) and doesn't require a physical meeting.	<ul style="list-style-type: none"> • Microsoft Outlook (for providing softcopy of the designs) • Microsoft Word (for documenting approval, viewing proposed changes, finalizing the design) • Computer

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Creating detailed design documents</p>	<p>Once the high-level design is approved, I expand upon it by breaking down the goal into the various steps and components involved. This process usually takes 4-5 days, depending on the complexity of the content.</p>	<p>My office at work, my home office</p>	<p>I am responsible for expanding on the approved high-level design by filling in the detail that will serve as the roadmap for the development process. I am accountable to my customers, my manager, and the Business Training Specialist.</p>	<p>Real design documents are required. A simulation can only be used in the form of a storyboard or e-learning sample – beyond that, authenticity is required to lead to a successful development. If a particular project does not allow resources for creating a detailed design, it is possible to pull parts from previous designs, as long as valid instructional objectives are written for the new project.</p>	<ul style="list-style-type: none"> • Microsoft Word (for creating the documents) • Formatting Solutions Pro (for formatting the documents) • The Instructional Design process (for a systematic approach) • Computer • The online tool mentioned for high level designs could also be used to further delineate for a detailed design. The form would contain the fields that are used in a detailed design, freeform text areas, a selection of performance verbs (which could be viewed and selected by the instructional designer as well as the sponsor when requesting the project)

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Creating instructional strategy</p>	<p>As part of the detailed-level design, the instructional strategy captures the recommended approach for instruction, implementation, and evaluation. Since most training needs are prescribed by the organization and dependent upon the availability of resources (trainers, classrooms, etc), this is a relatively quick process, typically taking less than a day.</p>	<p>My office at work, my home office</p>	<p>I am responsible for creating the instructional strategy based on the approved design. I am accountable to my customers, my manager, and the Business Training Specialist.</p>	<p>The instructional strategy must be authentic. However, it is not necessary to create the strategy from scratch every time a new project begins. It is possible to reuse prior strategies that worked well for similar learners and content areas.</p>	<ul style="list-style-type: none"> • The Instructional Design process (for guiding creation of an effective strategy) • Microsoft Word (for documenting the strategy) • Formatting Solutions Pro (for formatting the strategy) • Computer • Repository of lesson structures, ideas, and methods that may apply to certain projects; sources could be ASTD, Training Magazine, e-learning Guild, etc. We currently do not use these resources to determine best practices for training certain content areas, but this could be a could source of research in creating our instructional strategies on some projects.

IT Need	Time	Space	Who/What	Authenticity	Technology
Writing performance objectives	As part of the detailed-level design, this step produces the specific, measurable objectives that will be included in the learning solution. This process usually takes half a day to a day, depending on the complexity of the content.	My office at work, my home office	I am responsible for writing learning objectives. I am accountable to my customers, my manager, and the Business Training Specialist. I may contact the business lead or subject matter expert for validation of performance objectives.	Performance objectives must be authentic, as these specify how we know the instructional goal has been achieved. While the objectives must be documented as part of the design so that they properly guide the entire process, there are ways to introduce them to the learners without boring the audience with instructional design lingo.	<ul style="list-style-type: none"> • The Instructional Design process (for guiding creation of true performance objectives) • The ABCD methodology for objectives (audience, behavior, condition, degree) • Microsoft Word (for documenting the objectives) • Formatting Solutions Pro (for formatting the objectives) • The online instructional design tool mentioned above could also break objectives into their ABCD components within the tool, requiring an entry for each component, thus ensuring valid objectives are written

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Creating assessment instruments</p>	<p>I create assessment instruments once the performance objectives are finalized. Often the business prescribes a knowledge check or a multiple choice quiz, in which case this takes half a day to a day. Other times I am able to create more effective instruments, such as behavioral assessments in the classroom, evaluation checklists, and online simulations. In this case, it may take 1-2 days, including time for review by the business training specialist and/or sponsor.</p>	<p>My office at work, my home office</p>	<p>I am responsible for creating assessment instruments that measure the performance objectives. I am accountable to my customers, my manager, and the Business Training Specialist. I may work with the business lead, subject matter expert, and/or Business Training Specialist on determining how to create authentic assessments.</p>	<p>The assessment itself must be authentic; however it can involve a simulated experience (such as an online assessment activity for systems training, or an evaluated role-play activity).</p>	<ul style="list-style-type: none"> • The Instructional Design process (for guiding creation of assessment items) • Microsoft Word • Microsoft Excel (for creating quizzes that can be dropped into the online quiz maker) • Articulate Quiz Maker • Adobe Captivate • Standards-based rubric templates that allow for setting up authentic assessment that goes beyond measuring recall but requires successful performance. The template would make it easy to modify the rubric to set up an authentic assessment in new projects.

IT Need	Time	Space	Who/What	Authenticity	Technology
Instructional development	The length of time is highly dependent on the complexity of the content and availability of any existing materials. This process generally takes anywhere from 3 to 4 weeks, although it can be 5-6 weeks or more on complex projects.	My office at work, my home office	I am generally responsible for developing training that I design, although I occasionally hand off the design to the actual development team for support or completion, depending on workload and requirements. I am accountable to my customers, the project sponsor(s), my manager, and the Business Training Specialist.	The development must be authentic. It can consist of simulated components as appropriate, but the development itself must be authentic. The development can be simulated in the sense that existing materials can be leveraged in their existing form or modified for a new instructional situation.	<ul style="list-style-type: none"> • The Instructional Design & Development Process (technology as a process) • Microsoft Word • Microsoft PowerPoint • Adobe Flash • Adobe Captivate • Articulate Presenter • An online tool for collaborative development; perhaps Google Tools (documents, presentations, workflow, etc) or something similar • Standardized user interface template for e-learning projects to eliminate rework on future e-learning solutions

IT Need	Time	Space	Who/What	Authenticity	Technology
Selecting and developing instructional materials	<p>The length of time is highly dependent on the complexity of the content and availability of any existing materials. This process generally takes anywhere from 3 to 4 weeks, although it can be 5-6 weeks or more on complex projects.</p>	<p>My office at work, my home office, the Business Training Specialist's desk, the Business Training Manager's office</p>	<p>I am responsible for developing instructional materials for my projects, except when the project (all or in part) is handed off to the development team. When selecting existing materials, I collaborate with the Business Training Specialist and/or the Business Training Manager. I am accountable to my customers, the project sponsor(s), my manager, and the Business Training Specialist.</p>	<p>The development must be authentic, as instructional materials of some kind are required, whether they be guides for the instructor, participant, e-learning, etc. Not all projects require brand new development; in those situations, this need can be met by reproducing existing materials in their existing form or modifying them to fit the new instructional situation.</p>	<ul style="list-style-type: none"> • The Instructional Design & Development Process (technology as a process) • Microsoft Word • Microsoft PowerPoint • Adobe Flash • Adobe Captivate • Articulate Presenter • Learning Management System catalog • Media Library (existing instruction) • Web-based training resources could be a source for existing materials that can be used as is or with modification • Reusable Learning Objects, which are modular & can be used in multiple projects, potentially reducing development & maintenance time

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Graphic design</p>	<p>On most projects, existing graphics assets are sufficient, leaving this process to more of a selection and/or modification of existing graphics than a creation of new ones. For most projects, this takes no more than a day, generally half a day or less. On larger projects or situations that have a greater need for graphic design, I employ the help of the communications department.</p>	<p>My office at work, my home office, the Communications Dept desks</p>	<p>I am responsible for the message design, following sound principles. I am also responsible for identifying and using existing graphics assets as applicable. On large projects or when the need arises, I may collaborate with the Communications Dept, which includes a few graphic designers.</p>	<p>There is flexibility in this area. The message design itself has to be authentic, in that it must follow the principles of proper design and communication. The graphics themselves will be depictions of reality – thus they will be simulated in that sense. It is also possible to reproduce existing graphics with or without modification to fit the present scenario.</p>	<ul style="list-style-type: none"> • Principles of message design (technology as a process) • The Instructional Design & Development process • Adobe Photoshop • Adobe Illustrator • Snagit • Adobe Flash • Photofiltre • Microsoft clip art collection • Media Library (collection of existing instructional assets) • Digital camera or scanner could be used when photos might have a stronger impact • Online stock photo / clipart collection

IT Need	Time	Space	Who/What	Authenticity	Technology
Adding courses to the catalog	Both e-learning and facilitated courses must be housed in the Learning Management System (LMS). The length of time depends on whether the course is instructor-led or self-paced. It takes less than half an hour to add a facilitated course to the catalog. It can take anywhere from 1-2 hours to perform all of the actions required to enable access and use of an e-learning course in the LMS.	My office at work	I am responsible for loading my courses to the LMS. If I run into technical issues that I'm unable to resolve, I may work with IT or the LMS vendor.	This must be authentic in order for learners to be able to access the learning solutions they need or are required to take. My organization requires that all training be housed in the catalog and this is the only acceptable way for it to be accessed by learners and instructors.	<ul style="list-style-type: none"> • Java runtime environment • LSO Authoring Tool (for the SAP LMS) • Computer • A more robust, user-friendly Learning Management System would help greatly with this need
Evaluating instructional effectiveness	Time varies depending on which Kirkpatrick's level the effectiveness is to be measured and the degree to which performance needed to change as a result of instruction. Unfortunately many projects result in only a Level 1 evaluation, which takes less than half an hour to customize from the approved template. When given the ability or requirement to determine instructional effectiveness in terms of knowledge transfer and business results, the process is done in conjunction with others (supervisors, managers, business training specialist, etc) and can continue for several weeks after instruction has occurred.	My office at work, the sponsor's office, the Business Training Specialist's desk, managers' and supervisor's desks (for more extensive evaluations)	I am responsible for ensuring Level 1 evaluations are included in my learning solutions. For higher level evaluations, I work with the sponsor and the Business Training Specialist to evaluate instructional effectiveness. For more advanced evaluations, we may also collaborate with the learners' managers and supervisors to determine if transfer has occurred and how the business is being impacted.	The evaluation must be authentic in order to determine the effectiveness of the instruction. It is possible, however, to reuse previous evaluation strategies, methods, and instruments and apply them to the current scenario. I also do not necessarily need to be face-to-face with the instructional situation to evaluate effectiveness – this can be done through the use of evaluation instruments and methods.	<ul style="list-style-type: none"> • Instructional Design & Development Process (to guide proper & useful evaluation of instruction) • Microsoft Word • Online survey generator tool • Phone (for teleconferencing with remote managers / supervisors) • Reporting tools (for comparing previous & after-training performance) • Online collaboration tools

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Creating or modifying evaluation instruments</p>	<p>Our organization has adopted standard evaluation instruments, requiring only limited customization for each project. When time allows on a project or a sponsor requires it, additional evaluation instruments can be created. This normally takes less than half a day for each project and is done in conjunction with the Organizational Development department.</p>	<p>My office at work, the Organizational Development team's desks</p>	<p>I am responsible for creating / modifying evaluation instruments for Level 1 evaluations. For higher level evaluations, I may work with the Organizational Development team to create or modify appropriate instruments. I am accountable to my manager, my customers, the project sponsors, and the business lead.</p>	<p>The evaluation instruments must be authentic in order to capture the information needed to determine the effectiveness of instruction. Often it is perfectly acceptable to replicate previous evaluation instruments and use them in new projects with little or no modification.</p>	<ul style="list-style-type: none"> • Instructional Design & Development process (to guide the evaluation process) • Microsoft Word • Online survey generator tool • An online collaboration tool would help in working with Organizational Development • Survey Monkey

IT Need	Time	Space	Who/What	Authenticity	Technology
Deploying instruments	For facilitated instruction, instruments are delivered in class, requiring little or no time from me. For e-learning instruction, I may deploy an instrument within the course or as a follow-up communication, both of which would involve linking to an online survey. This takes less than half an hour in both cases. For more complex evaluations, I work with the communications and change management groups to prepare them for deploying the instruments, which generally takes 1-2 hours.	My office at work, the call center environment (associates' desks and the training rooms)	I am responsible for including evaluation instruments in the instruction that I develop. When co-developing instruction, other team members may be responsible for deploying instruments. For behavioral assessments, I may work with the Communications Dept and Change Management team to ensure they have what they need to deploy the evaluation.	Deployment of instruments must be authentic in order to properly evaluate instructional effectiveness. They can involve paper-based or online instruments, but they must be authentic in order to be useful. This generally does not require my physical presence, however, as the instructor can deploy in the classroom and online surveys are done virtually.	<ul style="list-style-type: none"> • Instructional Design & Development process (to guide the evaluation process) • Online survey generator tool • Printer (for printed evaluations) • Microsoft Word (for printing evaluations & results) • Survey Monkey • Perhaps an online evaluation form could be sent to learners automatically after they complete classroom training

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Evaluating results</p>	<p>Our organizational structure is such that the results are generally reviewed by the business training specialist and then shared with the design / development team. We generally collaborate on the results, lessons learned, and next steps, which typically takes 1-2 hours, depending on the project.</p>	<p>My office at work, Business Training Specialist's desk</p>	<p>I work with the Business Training Specialist to evaluate and interpret results. I am accountable to my customers, my manager, and the Business Training Specialist.</p>	<p>Evaluation of the results must be authentic in order for them to be useful for improving instruction. For online evaluations, analyzing the results can be done by viewing graphs and tables that describe the data visually.</p>	<ul style="list-style-type: none"> • Instructional Design & Development process (to guide the evaluation process and to modify materials) • Online survey generator tool (to retrieve reports of online evaluations) • Printer (for printed evaluations) • Microsoft Word (for printing evaluations & results) • Advanced online survey options allow for reporting of results, as well as graphical representations that can assist with interpreting results by region, facility, team, trainer, etc. This would certainly assist with evaluating the results.

IT Need	Time	Space	Who/What	Authenticity	Technology
<p>Using evaluation results to improve instruction</p>	<p>On projects in which we have the luxury of using evaluation results to improve instruction, the process usually takes 2-3 days. The exact timing depends on the complexity of the project, the results of the evaluation, and the amount of time available.</p>	<p>My office at work, my home office, the call center, Business Training Specialist's desk</p>	<p>I am responsible for using evaluation results to improve the instruction, as long as time and resources allow it. I may collaborate with the Business Training Specialist to document lessons learned and determine next steps. I may revisit the call center (performance environment and/or training rooms) to determine how the instructional strategy may need to be improved.</p>	<p>This must be authentic if the evaluation is to have the intended impact. The results of the evaluation need to be used to determine how the instruction can be improved.</p>	<ul style="list-style-type: none"> • Instructional Design & Development process (to guide the evaluation process, to determine next steps for improving instruction, and to improve the instruction) • Microsoft Word • Microsoft PowerPoint • Adobe Flash • Adobe Captivate • Articulate Presenter • An online tool for collaborative development; perhaps Google Tools (documents, presentations, workflow, etc) or something similar • The online form that was suggested for instructional design could be used again here to document & guide the revision process