Removing the “I” from Instructional Design:
How Teamwork Makes Instructional Design a Possibility for All

Dominique Turnbow and Amanda Roth*

Introduction
Academic instruction librarians have long understood the value of the research and practice that the field of education has offered our profession. Over the past decade, there has been a building interest in the subfield of instructional design that closely correlates with the increased interest in delivering online information literacy instruction. While there is a growing desire to have instructional design librarians as part of library instruction teams, many librarians have little to no experience with instructional design and may find it challenging to make a case to hire new people that have the skills, knowledge and abilities needed to do this work.

When describing an instructional designer to assist with the development of information literacy instruction one may be looking for many skills including a consultant, project manager, developer, evaluator, media expert, innovator, writer, editor, and technology specialist. As with academic librarians, the experience and expertise of instructional designers are varied and the skills needed to create effective learner-centered online tutorials are equally diverse. In addition to specialized expertise, most academic library instructional design jobs couple instructional design job duties with other public service responsibilities, such as liaison groups, reference and outreach. In a five-year survey (2011–2016) of job posted on the American Library Association Information Literacy Instruction Discussion List, 16 out of 25 job descriptions included responsibilities in public services. As part of a major reorganization, the UC San Diego Library dedicated resources to building an instructional design team that was void of these responsibilities. We recognized the need to have instructional designers dedicated to the design and development of online instruction. Further, we created two distinct positions: one focused on project design (Instructional Design Librarian) and one focused on development—or building (Instructional Technologies Librarian). The benefit has been the ability to focus our efforts on developing effective in-person and online instruction across our organization. This paper provides our recommendations of the knowledge, skills and abilities required for instructional design work, along with a detailed discussion of our systematic process for how these positions work together to complete projects.

What is Instructional Design?
Before you can understand how we “do” instructional design in our library, you need to know a little bit about instructional design. A quick Internet search will reveal various definitions for instructional design (ID). At the core, all agree that ID is a systematic process by which instructional interventions are designed, developed and delivered.

* Dominique Turnbow is Instructional Design Librarian at UC San Diego, dturnbow@ucsd.edu; Amanda Roth is Instructional Technologies Librarian at UC San Diego, a4roth@ucsd.edu.
ID is systematic. Regardless of how small or large a project or method of delivery (e.g. in-person or online), instructional designers use an organized, evidence-based process to guide the design of the instructional intervention which includes analysis of audience, stakeholders, and learner knowledge gaps along with identifying the learning goal and outcomes.

ID focuses on interventions. Instructional designers are problem solvers. Their job is to close the gap between what learners already know and what they need to know in order to accomplish a task (e.g. find a book about a topic) or complete and assignment. Instructional designers use their systematic analysis to identify the best way to teach learners the information that they need to know. The methods used to teach content are considered separately from the delivery method (i.e. online or in-person). Instructional designers use their extensive knowledge of educational pedagogies to inform recommendations of the way to teach content and they provide options for delivery (e.g. screencast, in-person workshop, online tutorial, etc.)

ID considers design, development and delivery as separate processes. There are various models that instructional designers use to guide their practice, however they all include a version of design, development and delivery. These distinct processes require unique skills. Design focuses on analysis of audience, learners, instructional outcomes and curriculum, delivery methods, and evaluation and assessment. During development, the instructional intervention is built. This could be creating an online tutorial or creating an in-person workshop. During the delivery phase, the instructional intervention in tested to ensure the learner's experience corresponds with the designer's intention (especially if it is online). Some instructional designers are well practiced in all three areas and some are not. However, acknowledging the role each of these processes play in the ID process is essential to building an instructional design program.

Understanding that we needed to approach this work systematically, we proceeded to build our instructional design team.

How We Do It at UC San Diego
The library's reorganization in 2012 afforded us the opportunity to reconsider how we were supporting the work of instruction librarians. A new Learning Services Program was created that included an instructional design team with an Instructional Design and Instructional Technologies librarians. These positions work together to provide instructional design services to UC San Diego librarians and the faculty they liaise with. One way to think about how we work together is to imagine the instructional designer as the architect and the instructional technologist as the engineer. The instructional designer focuses on design, assessment and evaluation while the instructional technologist develops (aka builds) and delivers (aka deploys).

In the early stages of the library reorganization, a librarian that previously liaised with a campus division, moved into the Instructional Design Librarian role as a result of her formal education in Instructional Design and experience in successfully using ID approaches in her liaison area. The library hired a temporary Instructional Technologies Librarian to help build up this part of the Learning Services Program. After only one year, the team demonstrated a need for a person in this position full-time and was able to hire permanently. In the following section, we’ll detail the skills and job duties for each of these positions.

Skills and Job Duties
As mentioned previously, the Instructional Design and Instructional Technologies Librarians work closely together; however, they have different skill sets. Below are key skills sets for each position.

The Instructional Design Librarian has:

- Extensive knowledge of current instructional design (ID) practices, theories and approaches. The ID Librarian at UC San Diego has a MLIS and a Masters in Educational Technology (aka Instructional
Design). In addition to following current practices in instruction librarianship, she follows industry approaches in instructional design. She regularly attends ID conferences and reads ID literature.

- **Ability to apply ID practices, theories and approaches to library work.** ID was born out of industry and traditionally is used in workforce training. In recent decades, educators are using ID models, theories and approaches in educational settings that often require modification in order to meet the needs of the university educational setting. Further, there are many challenges that instruction librarians face that require additional finessing of traditional ID models to make them applicable in libraries. The ID librarian needs to have a deep understanding of pedagogy and instruction librarianship in order to creatively weave ID into the work the instruction librarians do.

- **Ability to lead and manage projects.** Instructional designers do a lot of project management. Our typical project has at least four stakeholders (the learners, ID team, faculty member, liaison librarian to the department for the project). From design, development and delivery to assessment and evaluation, it is the instructional designer’s job to make sure that the project is completed on time and addresses the needs of all stakeholders. Another part of this is managing the resources of the library. Even though we have a great team in place, our resources are limited. It is the ID librarian’s job to be a good steward of people and financial resources.

- **Big picture thinker.** Part of the ID librarian’s job is to identify opportunities for the library to collaborate with campus stakeholders. In order to do this, it is helpful for the instructional designer to be able to envision the end result, or at the very least articulate how ID work in libraries furthers the library and campus strategic goals.

- **Ability to manage project politics.** In our experience, there are a few important factors that contribute to project politics.
  - Stakeholder Personalities. You cannot underestimate how personalities can change the direction of a project. It is the ID librarian’s job to make sure the project stays focused, regardless of how personalities may change the team dynamics or pace of the project.
  - Stakeholder Expectations. This includes the expectations of what the stakeholders want the final product to be and the expectations of the ID Team. We have found that it is best to manage expectations through formal communication channels such as work agreements and less formal channels such as project meetings and email. However, instructional designers should expect to have to remind stakeholders of these expectations throughout the project.

The Instructional Technologies Librarian has:

- **Experience with development principles and best practices.** In the role of “engineer,” the Instructional Technologies Librarian needs the skills necessary to build learning objects efficiently. Time is valuable not only in terms of the amount of time it takes to create an object but as well as the time it takes for stakeholder review and subsequent revision. An understanding of development principles and best practices ensures that a project stays on time, that input and object review occur at the most logical place within the development process and that milestones and deadlines are met.

- **Ability to learn, evaluate, and use changing educational technologies.** Staying abreast of the technology landscape both inside and outside of the academic setting is an important aspect of creating sustainable and flexible e-learning objects. As software tools and technologies become in vogue it’s important to understand their potential applications in teaching as well as be critical as to whether or not a software application is suitable for a specific academic learning environment, its potential life cycle, interactivity with existing applications, and suitableness for learners.
• **Ability to understand and create technical documentation.** Documentation of learning objects is essential to product development and testing as it not only contains the object specifications but also informs the creation of testing plans if applicable. More importantly, documentation provides instructions for other developers and designers to duplicate, rebuild, or revise the object that was created.

• **Ability to speak the language of instructional design and information technology.** Working closely with an ID librarian requires an understanding of instructional design principles and practices to aid in communication as well as translate an ID principle into a working model. At times, technology may add unforeseen constraints to a designed interaction. ID knowledge as to the intent of the design makes it possible to work with technology constraints by finding alternatives or workarounds that stay true to the design purpose while fitting within the functionality of the software application.

• **Willing to take creative risks and learn from failures.** This is a development mindset that speaks to an individual’s ability to “test drive” applications or tools in live environments with the understanding that it could work differently with active learners when compared to a staged environment. It requires creative problem solving to accomplish projects within resource restrictions and a thick skin to accept feedback and even criticism without taking it personally.

Now, let’s consider the job duties of each position. While our job cards are more extensive than this list, these are the most important duties for the Instructional Design Librarian:

• **Create a vision for instructional design.** It is valuable to have vision for what ID “looks like” at your institution, given your library and campus strategic direction, resources and priorities.

• **Identify opportunities for collaboration.** The ID librarian best understands the vision of the library instruction program and how ID fits into it. It is necessary to interact with faculty outside the library in order to identify natural collaborations for projects and offer ways for the library to support them with their instructional endeavors.

• **Develop best practices for e-learning.** This is accomplished in consultation with the Instructional Technology librarian and the library or campus IT department. It is vital to have a deep understanding of the technology landscape at your institution so you understand how students are using technology to support their course work and so you can make good decisions about technology to use for development.

• **Create instructional design “blueprint” for e-learning objects.** In the role of “architect” it is the ID librarian's responsibility to have a vision for the final product and articulate that to stakeholders and the Instructional Technologies Librarian.

• **Provide overall project management for the creation of e-learning objects.** Here are the primary job duties for the Instructional Technologies Librarian.

• **Transform instructional design blueprints into deployable e-learning objects.** Create the learning object that has been conceptually designed by the ID librarian and stakeholders. Ensure that it functions as specified without error, deploy it to a designed space (e.g. a link on a website, embedded in a learning management system) and provide learner support for the object.

• **Create and maintain technical documentation for created objects.** Document all technical specifications and requirements for an object. Maintain version control and maintenance logs.

• **Investigate e-learning technologies and make recommendations for use.** Provide a thoughtful analysis as to why or why not a technology should be adopted.

• **Provide a technical voice to the discussion of teaching possibilities.** Be a liaison between technology departments both on campus and within the library and librarians in relation to the use and interactivity of instructional technologies.
Once you have identified individuals that have these skills, you can develop an instructional design process that fits the needs of your organization.

**Our Process**

At the UC San Diego Library we have created an instructional design process that allows for flexibility and relies heavily on excellent communication—both written and oral—between the instructional designers and stakeholders. Table 1 provides an overview of the process. Sample documents are available at: bit.ly/design-docs.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Responsibility</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ID request received</td>
<td>Request is received via e-mail or online request form from liaison librarian or faculty member.</td>
<td>Instructional Design Librarian</td>
<td>Online request form</td>
</tr>
<tr>
<td>2 Meet with stakeholders</td>
<td>Initial meeting with stakeholders to determine the scope of the project, learning goals and outcomes and begin the analysis. Subsequent meetings follow as needed to complete the design phase.</td>
<td>Instructional Design Librarian</td>
<td>Work Agreement Design Document</td>
</tr>
<tr>
<td>3 Blueprint</td>
<td>Instructional Design Librarian communicates project “blueprint” to the Instructional Technology librarian. We discuss this verbally and document it using the Instructional Design Product Document.</td>
<td>Instructional Design Librarian &amp; Instructional Technology Librarian</td>
<td>Instructional Design Product Document</td>
</tr>
<tr>
<td>Ongoing communication with stakeholders</td>
<td>Communication continues via meetings and/or e-mail.</td>
<td>Instructional Design Librarian</td>
<td></td>
</tr>
<tr>
<td>4 Building: Phase 1</td>
<td>Instructional Technologies Librarian creates object documentation that details the specifications and requirements of the object. Wireframes storyboard and color schemes are created to provide a visual representation of the project to stakeholders.</td>
<td>Instructional Technology Librarian</td>
<td>Object Documentation</td>
</tr>
<tr>
<td>Ongoing communication with stakeholders</td>
<td>Communication continues via meetings and/or e-mail.</td>
<td>Instructional Design Librarian</td>
<td></td>
</tr>
</tbody>
</table>
Lessons Learned

After two years of developing our team and implementing this process, we have several observations and lessons learned.

- Instructional design and technology skills are equally important for project success. Our Instructional Design and Instructional Technologies Librarians work closely together. Their unique knowledge, skills and abilities equally contribute to the success of projects.

- Lines get blurred. Even though the Instructional Design and Instructional Technologies Librarian each have their area of expertise, they need to know enough about the others’ role in order to make key decisions. For example, project blueprints need to include activities that can be technically implemented. If the ID librarian doesn’t know the technical limitations of the software used for development, then she can’t create practical activities. Alternatively, if a component of the project needs to be changed due to technical limitations, the instructional technology librarian needs to draw upon instructional design approaches to modify it.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Responsibility</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Building: Phase 2</td>
<td>Alpha and/or beta versions of the object are completed and reviewed by stakeholders; revisions implemented.</td>
<td>Instructional Technology Librarian</td>
</tr>
<tr>
<td></td>
<td>Ongoing communication with stakeholders</td>
<td>Communication continues via meetings and/or e-mail.</td>
<td>Instructional Design Librarian</td>
</tr>
<tr>
<td>6</td>
<td>Building: Phase 3</td>
<td>The final version is deployed and tested. Student usability testing may also be completed during this phase if the object requires it.</td>
<td>Instructional Technology Librarian</td>
</tr>
<tr>
<td></td>
<td>Ongoing communication with stakeholders</td>
<td>Communication continues via meetings and/or e-mail.</td>
<td>Instructional Design Librarian</td>
</tr>
<tr>
<td>7</td>
<td>Assessment &amp; Evaluation</td>
<td>Assessment and evaluation are determined during the design phase. Formative assessment (i.e. did the learner achieve the outcome) is typically built into the instructional intervention through interactive activities with immediate feedback provided to the learner. An evaluation (i.e. did the learner like the intervention) is administered at the end of the intervention via an online form.</td>
<td>Instructional Design Librarian</td>
</tr>
</tbody>
</table>
• Communication is key. Communication throughout the process between the instructional design team and stakeholders is essential to managing expectations and meeting project deadlines.

• Time protection is required. In order to make project deadlines, the builder of the object may need to have the flexibility to work undisturbed or shuffle planned “build” hours due to late feedback, unplanned additions or major revisions. It is also helpful for one member of the team to communicate with stakeholders about questions that arise while the other person proceeds to another part of the project. In this way time is managed efficiently. Additionally if instructional design duties are assigned to an individual who also has public services responsibilities, time to do the actual work of building an object becomes a crucial commodity. For example, a two minute video screencast could take several hours to create and deploy. It is often the case that projects take longer to build than anticipated. If e-learning objects are a desired element of the information literacy instruction that is provided, time to create, test, and maintain those objects needs to be made available.

• Documenting process is as important as the end product. Documentation of the entire project is key to communication between team members as well as stakeholders as it documents the intellectual design aspects of a project. Putting decisions in writing helps keep the project on task and can be leveraged in the management of potential issues or questions that inevitably seem to circle back around. Documentation also makes it possible to reuse elements of other objects, forms the basis of testing, and makes it possible for someone outside of the team to understand and even duplicate the process.

• Recognizing limitations or gaps in skills reminds us that the process of instructional design requires a vast skill set. There may be instances when partnering with individuals, programs or departments is necessary to meet the instructional design goals of a project.

Making it Work for Your Library

The knowledge and skills required to provide ID and create information literacy objects is varied and it is unlikely to find one librarian who is able to do everything well. The key to making an instructional design team work for you is to inventory the skillsets that currently exist within your library, identify any existing skill gaps and then fill those gaps. Filling skill gaps may be accomplished by hiring for them outright or perhaps leveraging the skills of employees that already work within your library. Even within the ID team at the UC San Diego Library, expertise that may be lacking for a given project are leveraged from other employees who may be skilled at art, graphics, video recording, etc., on a project basis. Additionally, considerable thought should be given to the work load of an ID librarian. Working with teaching librarians, meeting with stakeholders, building and maintaining learning objects and documenting the process takes a considerable amount of time. It may be unreasonable to assume that one librarian can be an instructional design resource for your library as well as serve in areas of public service. Thinking strategically about the instruction needs of your users and creating an ID team to support them means you can meet the strategic needs of your library and institution regardless of size or budget.