

LENDER

BORROWER

UAB

Aleph

Aleph

MII

100 304182 JW

MST

FEB 07 2013 WS



Request # 3038960
Printed Date 02/05/2013
Need By Date 03/07/2013

Request # 574153
Borrower MST - St. Cloud State University
Request Date 02/05/2013

Title: Journal of Library & Information Services in Distance Learning.

ArticleAU: Summey, Terri

ArticleTI: But We Don't Have an Instructional Designer: Designing Online Library Instruction Using ISD Techniques.

Year: 2013 Aug 01; vol.7 iss.1/2; ISSN: (1533290X) - 45705845 - IWIDIR BZNY

Descrip: 169-182

Imprint: 2013

Copyright: US:CCG

Source: DEFAULT (via SFX)

net @ mii

E-Mail: pmilttenoff@stcloudstate.edu

@google

Requested Material *** Attention: Patron has requested MEDD delivery for this article when possible ***

Patron Barcode



Request Note

Patron Status 14

Request Status New

MNCAT	FIRSTSEARCH LA	CAMPUS	VDX	WISCAT	RETURN TO
-------	-------------------	--------	-----	--------	-----------

MAL

MEDD REQUEST

MINITEX Library Information Network

This material comes to you from the University of Minnesota collection or another participating library of the MINITEX Library Information Network.

For more information, go to <http://www.minitex.umn.edu>.

NOTICE WARNING CONCERNING COPYRIGHT RESTRICTIONS

The copyright law of the United States [Title 17, United States Code] governs the making of photocopies or other reproductions of copyrighted material

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specified conditions is that the reproduction is not to be used for any purpose other than private study, scholarship, or research. If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that use may be liable for copyright infringement.

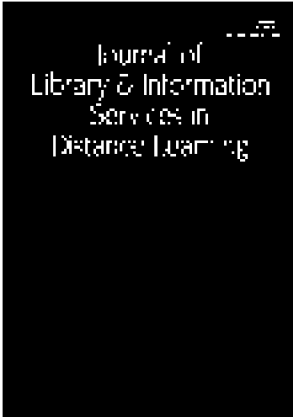
This institution reserves the right to refuse to accept a copying order if, in its judgement, fulfillment of the order would involve violation of copyright law. No further reproduction and distribution of this copy is permitted by transmission or any other means.

This article was downloaded by: [University of Alberta]

On: 07 February 2013, At: 10:57

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Library & Information Services in Distance Learning

Publication details, including instructions for authors and
subscription information:

<http://www.tandfonline.com/loi/wlis20>

But We Don't Have an Instructional Designer: Designing Online Library Instruction Using ISD Techniques

Terri Pedersen Summey^a & Sandra Valenti^b

^a University Libraries and Archives, Emporia State University,
Emporia, Kansas, USA

^b Technology and Computing Services, Emporia State University,
Emporia, Kansas, USA

Version of record first published: 12 Nov 2012.

To cite this article: Terri Pedersen Summey & Sandra Valenti (2013): But We Don't Have an Instructional Designer: Designing Online Library Instruction Using ISD Techniques, Journal of Library & Information Services in Distance Learning, 7:1-2, 169-182

To link to this article: <http://dx.doi.org/10.1080/1533290X.2012.705630>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

But We Don't Have an Instructional Designer: Designing Online Library Instruction Using ISD Techniques

TERRI PEDERSEN SUMMEY

University Libraries and Archives, Emporia State University, Emporia, Kansas, USA

SANDRA VALENTI

Technology and Computing Services, Emporia State University, Emporia, Kansas, USA

Librarians offer a variety of library instruction utilizing multiple formats. Many struggle with the task of transferring instruction to the online environment. Principles of instructional design can be leveraged to effect quality change in the delivery of instruction to make teaching more effective, efficient, and appealing to learners. Although having an instructional designer on the staff of the library can be extremely beneficial in designing library instruction, for many libraries this is not a reality. Libraries can offer quality instruction without hiring an instructional designer. Instructional design is, in and of itself, a systematic way to approach learning. While it is impossible to share the breadth and scope of instructional design in a single paper, it is the goal of this paper to provide some overview of the design process and to point the reader to references and resources that serve to improve the quality of instruction given by librarians.

KEYWORDS instructional design, library instruction, ISD, faculty librarian collaboration

INTRODUCTION

In recent decades the instructional role of libraries has steadily increased, mainly because of the growing use of technology and proliferation of information. There has been a paradigm shift in higher education: to the creation

Address correspondence to Terri Pedersen Summey, Emporia State University Libraries and Archives, 1200 Commercial, Box 4051, Emporia, KS 66801, USA. E-mail: tsummey@emporia.edu

of more flexible learning environments with learning anytime, anywhere. Although academic libraries have commonly had education as an integral part of their mission, opportunities and methods of presenting library instruction have also grown in college and university libraries. This shift in higher education has influenced the delivery of library instruction. As a result, academic librarians offer a variety of instruction to their students, faculty, and staff using assorted methods of presentation. These methods include learning objects, online tutorials, library guides, and even credit-producing information literacy courses. Even though teaching is a major component of the jobs of many librarians, most enter the library profession without a lot of teaching experience or even coursework in the area of library instruction. For the most part, librarians learn to teach while on the job: gaining knowledge and experience through formal workshops and classes or informal means such as networking and trial-and-error.

Recently, with more emphasis on online or distance learning, librarians have also had to learn how to adapt their face-to-face library instruction to the online environment, which brings with it more challenges. One way to meet this challenge would be to adopt the principles of instructional design. These principles may be utilized to create instruction that is effective, efficient, and appealing to learners. Instructional design is a systematic way to plan and present instruction and training. As Piskuriich states, "Instructional design is a way to plan your training program from the moment you have the idea for it (or the idea is given to you) until the moment you complete your revisions of your first effort and get ready to run the program again" (2006, p. 4).

Having an instructional designer on the library staff is an extremely beneficial addition to an instructional team, but for many libraries this is not a reality. Fortunately, libraries can design and offer quality instruction without an instructional designer on their staff. Librarians can acquire the skills and knowledge inherent in instructional design without completing a formal educational program and apply the knowledge gained to the creation of library instruction, from library guides to the credit producing information literacy course. In this article, an instructional designer and a librarian have come together to present the principles that comprise instructional design, explore how librarianship and instructional design can come together, and discuss how instructional design principles may be applied in the design of library instruction.

INSTRUCTIONAL DESIGN AND LIBRARIES

Although many academic institutions employ instructional designers and some of the larger academic libraries may have an instructional designer on the library staff, a search of the literature on instructional design in libraries produced only a few articles linking the two concepts together. Very few provided practical advice for a librarian who does not have an instructional

design degree to employ in developing instruction. Several researchers addressed instructional design issues related to providing information literacy instruction to a distance learning community. In the article *Information Literacy at a Distance* the authors presented several factors which may influence the delivery of online instruction, such as the technological knowledge and expertise of both the instructor and the students; the technological infrastructure of the institution and the students; the relationship between the instructor and the students; the relationship between the librarian and the instructor, which impacts the relationship between the librarian and the students; and pedagogical objectives. For the purpose of this research, the significant portion of the article was the discussion of creating a collaborative relationship with faculty members teaching the online courses in order to form successful relationships with the students and develop effective instruction. Another salient point was the importance of determining clear, learner focused objectives that are linked to assessment (Dewald, Scholz-Crane, Booth, and Levine 2000).

Lo and Dale (2009) provided information on a partnership they formed to develop an online tutorial for an Introduction to American Ethnic Studies course at Kansas State University. The subject librarian provided the subject matter for the tutorial and collaborated with the instructional design librarian who provided the technical expertise. Their article provided information on the development and contents of the tutorial along with the results of a pilot test of the modules and recommendations for the future. Information on the design and assessment processes of the tutorial proved to be useful for this project. The utilization of interactive technologies in information literacy instruction was the focus of a study at the University of North Carolina at Pembroke. This study compared the improvement in information literacy when clickers were used as an instructional aid as opposed to the less technologically savvy method of raising hands. Although both classes showed increases in knowledge, the use of the clickers during the instruction sessions allowed the students to be more actively engaged causing them to retain more information. This research emphasizes the importance of active learning and student engagement in the design of instruction (Holderied 2011).

The instructional design principles of David Jonassen (2000) were utilized to provide information on creating instructional programs in academic libraries that meet the needs of not only individual academic programs and courses, but also the needs of the learners with diverse learning styles and experiences. The importance of developing collaborative partnerships was emphasized by Macklin (2003), "... librarians must be strategic partners supporting, developing, and carrying out educational goals both inside and outside the library" (p. 494). Through these collaborations with faculty, librarians can work with instructors to determine the best methods to integrate instruction on information literacy skills into course content by creating student driven learning objectives and activities that promote critical thinking and problem solving. In building sustainable partnerships with faculty, librarians

can learn about course content and assignments in order to create relevant instruction plans; identify appropriate resources to build digital resource collections; and assess the learning outcomes. Macklin (2003) recommended that not only should librarians seek partnerships outside of the library, but that collaborations may be formed within the library. Librarians within a single library may possess different skill sets and areas of expertise such as subject matter experts, Web design specialists and instructional designers (Macklin 2003).

In *Instructional Design for Librarians and Information Professionals* (Farmer 2011), the author presents information on instructional design including an overview of instructional design, learners, and learning styles. The steps that an instructional designer takes to develop and create instruction are provided with the author helping to make the instructional design process applicable to librarians and other information professionals. Both have unique positions in academic institutions because they not only have information literacy skills, but in many cases possess subject expertise and advanced degrees. This allows them to relate to different disciplines across campus by understanding how the various academic disciplines create and share information and knowledge. As with research mentioned earlier, librarians taking a proactive approach to developing partnerships with teaching faculty to develop library instruction was emphasized. When collaborating on library instruction, librarians may need to seek out information from subject instructors on the content of the course and the assignments along with the past experiences, knowledge, and skills of the learners. Another important point from this work was the idea that librarians can work together to create learning objects or self-contained learning aids that may be shared with colleagues and reused with other library instruction (Farmer 2011).

THE BLENDED LIBRARIAN

Although changes in higher education have increased the educational mission of libraries, the proliferation of information sources outside their purview has led to a feeling of marginalization of libraries on campuses and a desire to reclaim a central role in academic institutions. According to Bell and Shank (2004), "... the future of academic librarianship depends on our collective ability to integrate services and practices into the teaching and learning process" (p. 373). But as mentioned earlier, many librarians enter the profession without experience or coursework in teaching and lack knowledge of not only pedagogy, but also learning and educational theories. Skills and knowledge in how to create effective instruction, develop learning activities, and assess learning outcomes are important for librarians to acquire in order to move from a tangential role to a more integrated role in higher education. To do this, the concept of the blended librarian was developed. A blended librarian is "an academic librarian who combines the

traditional skill set of librarianship with the information technologist's hardware/software skills, and the instructional or educational designer's ability to apply technology appropriately in the teaching-learning process" (Bell and Shank 2004, 373–374). Many librarians wear a variety of hats but just having varied responsibilities, even if those involve technology, do not constitute blended librarianship. This concept is a more intentional combining of librarianship and instructional design.

To become a blended librarian, one does not necessarily have to complete a formal program of study obtaining a degree in instructional design. Many librarians learn about teaching through experience on the job or through other methods such as workshops. Learning the principles of instructional design could be another educational opportunity to expand the instructional skills and abilities of librarians (Bell and Shank 2007). In her work on instructional design and libraries, Goodman (2009) discusses the concept of the blended librarian. The originators of the concept took the ADDIE model modifying it for librarians through the creation of the BLAAM model (Blended Librarian Adapted ADDIE Model). This model had several phases or steps to be utilized by librarians to systematically create library instruction: assess the instructional needs and situation; determine learning objectives; develop an instructional plan and activities; deliver the instruction; and measure the outcomes against the learning objectives (Goodman 2009, 42–43).

INSTRUCTIONAL DESIGN, ADDIE AND LIBRARY INSTRUCTION

Although several models for instructional design exist, at the root of all design strategies is a system that guides the designer. "A system is technically a set of interrelated parts, all of which work together toward a defined goal" (Dick, Carey, and Carey 2009, 1). The goal, in this case, is library instruction. This section of the paper will explore the components of the ADDIE model as the system that underlies the instructional design effort. It should be noted here that, according to Morrison, Ross, and Kemp, "there is no such thing as *the* ADDIE model or even *an* ADDIE model"; they go on to note that, "the term ADDIE model is merely a colloquial label for systematic approach to instructional development, virtually synonymous with instructional systems development" (2007, p. 13). Regardless of its pedigree, ADDIE is widely used today as a basis for instructional design, and offers an easy-to-recall structure to guide instructional efforts. Ideas on how librarians can apply the ADDIE model are included.

The ADDIE name is an acronym for the steps in the design process: Analyze, Design, Develop, Implement, and Evaluate. "The beauty of the model is that each instructional designer can interpret the steps in the process in the way that best fits their organization; it is highly adaptable" (Colborn 2011, 16). The process is intended to be circular in nature, allowing the

designer to constantly reassess and improve the instructional design, resulting in a continuing cycle of effectiveness and applicability.

Using the steps designated within ADDIE allows the librarian or other instructional designer to break down the tasks required to build documentation or media, creating manageable “chunks” of content development. At each step of the process, the end user must be kept central to design considerations. “Because instructional design is learner centered, the place to start designing is the learner” (Farmer 2011, 27).

Analyze

The first step in the process is to analyze the instructional need. Who is your learner? What is the learning context? What outcomes are anticipated? In other words, it is during this stage that a gap between learners’ current knowledge and abilities, and the desired learning condition, is identified. Morrison, Ross, and Kemp (2007) describe four outcomes of the analysis process:

1. Identify the needs of the learner relevant to a particular job or task.
2. Identify critical needs, which might disrupt the learning environment.
3. Set priorities for selecting learning strategies.
4. Provide baseline data from which to compare learning assessments.

Pre-tests may be used to identify current learner abilities, and faculty and instructors can be of especial assistance as subject matter experts (SMEs), naming anticipated competencies and assessments, as well as identifying those critical needs that could stall the learning process.

Another learning aspect to consider is the context for instruction. Dick, Carey, and Carey note that “from the very beginning a project designer must be clear about the context in which the skills will be used” (2009, p. 25). What tools will be available to the learner? If the librarian is providing instruction on searching OCLC, will computers be available to the learners? If not, how will the search steps be replicated as part of the learning process?

In the analysis phase, the librarian analyzes the instructional need by looking at the context for the instruction, the audience and their traits and characteristics, learning needs, and other factors that will determine the instruction to be developed. For library instruction designed for specific academic courses, this is one phase where collaboration and communication with the faculty member teaching the course is vital. There are many questions to be asked and answered during this phase. Who is the audience for the instruction? Are there any assignments for the course that can be targeted through the instruction? What do the students in the course already know or what skills do they possess? In what format is the instruction needed: face-to-face, a library guide, or online? How long will the instruction session

be? Working with the faculty member can facilitate finding the answers for these and other questions, and assists with the analysis phase.

Design

Following the analysis stage is the design phase of the instructional design model. As part of the design phase, the librarian will carefully review the performance gap and assemble the criteria appropriate to the task at hand. The instructional approach should contain three components, as described by Welty: "(1) fitting the proposed learning product into the larger curriculum, (2) outlining the proposed learning product, and (3) securing management approval of the outlined learning product" (2008, p. 13). In this case, approval might come from the library's dean or from the faculty member serving as the SME.

During the design phase, it is important to work on the content being planned with the instructional learning objectives clearly in mind. "Simply, if instruction is to accomplish desired outcomes, it is imperative that those designing the instruction, as well as the ones doing the instruction, have a clear picture of those desired outcomes" (Mager 1997, 13). These objectives should be consistent throughout the instructional materials.

Your objectives should be clear and should get your instructional objectives across in as few words as possible. Mager (1997) lists three characteristics that will guide the development of outcome statements:

- What should the learner be able to do?
- Under what conditions do you want the learner to be able to do it?
- How well must it be done? (p. 46).

An example might be: "At the end of the instruction, biology students will be able to analyze an article abstract on a topic and determine if the article is part of the primary or secondary literature."

Refer to the user analysis developed during the first phase. Who is the learner? Objectives must be achievable given the group's age, technical skill, and cultural attributes. Remember also any standards in place that might affect your selection of outcomes, such as state teaching standards. In library instruction, often learning objectives are specified by the faculty member teaching the course but they may also be developed in conjunction with the instructor. Learning objectives state what the goals of the instruction are or what is to be learned during the instruction session or through use of the library guide. When developing an entire course with a variety of modules or sessions, there should be objectives for not only the instruction as a whole, but also each section or module.

Another important part of developing materials is consideration of assessment. How will you measure student success with your materials?

Although it might seem intuitive to develop assessment tools later, it should really be a part of the design phase. “The major reason is that the test items must correspond one to one with the performance objectives” (Dick, Carey, and Carey 2009, 133). Once again, teaching staff or faculty can be invaluable in providing guidance as instructional content development begins. Their specialized understanding of a given topic and its associated learning outcomes can help you design effective library materials. The faculty member serves as a subject matter expert. When a librarian is using the instructional design principles to develop instruction, the librarian may serve dual roles as the instructional designer and one of the subject matter experts. The librarian is the subject matter expert for library, research, and information literacy skills.

During the design phase, information gathered during the analysis phase may be used to make decisions that will guide the development of the instruction session or library guide and help in creating the design document or instruction plan. This document will contain the decisions made about the instruction to be developed. An example of an instruction plan is included (see Appendix). Once the instruction plan has been created, this is also a time when communication and collaboration with the teaching faculty member is crucial. Collaboration may take place during the creation of the document or through feedback when the plan has been created. During this phase crucial decisions are made concerning the delivery method for the instruction, the content to be presented, the time allotted for training, instructional materials to be created, and who will be involved with the instruction. It is at this stage that a topical outline for the instruction is written.

Develop

With instructional goals and learning objectives established, it is time to actually develop your materials. Several decisions must be made at this juncture, based on the learning objectives developed earlier. What is the best way to deploy the materials?

John Keller’s (2006) ARCS model provides a user-centric lens through which to view materials development. The model name is an acronym for Attention, Relevance, Confidence, and Satisfaction. “These are the factors that together with effort, the outcome of motivation, have a direct influence on the quantity and quality of a person’s performance” (Keller 2006, ARCS Design Process, para. 3).

Another aspect of course development involves how the content will be packaged. Will you plan to deliver all materials online? If so, how will users access the content? Issues of Web site usability may be addressed by visiting the Department of Health & Human Services’ Usability.gov Web page, which “provides information about what usability is, why it is important, how much it costs, measurement and other basic information” (U.S. Department of Health & Human Services n.d., homepage, para 2); also included is a

usability methods section, a set of templates, guidelines for user-centered design and other resources.

Especially dealing with Web-based content, rapid prototyping can be helpful in instructional development. "Rapid Prototyping can be thought of as a series of informed, successive approximations, emphasizing the word informed because this developmental approach relies absolutely on information gathered during tryouts to ensure the success of the final product" (Dick, Carey, and Carey 2009, 232). In other words, designers do not wait for product completion to begin testing the design. It is tweaked and modified as part of an ongoing developmental process. "By working with the stakeholders throughout the process, you get organizational buy-in, and the final resource is more likely to be accepted and used in training and application" (Farmer 2011, 98).

How will the content be organized in terms of presentation? The sequencing of your course might be based upon time, complexity, or might be world-related. Of world-related sequencing, Dick, Carey, and Carey (2009) describe approaches that might be used in developing instruction for automotive sales: "Do you start at the front of the car and move to the back in your presentation? Or, do you begin by describing what the drivers see when they approach the car" (p. 134). Posner and Strike's (1976) article frames the issue, "In order to properly deal with the prescriptive question, How *should* content be sequenced? we need first to ask the prior descriptive question, In what ways *can* content be sequenced?" (p. 665). The article considers alternatives to those questions.

A lesson plan is written during this phase which will contain all of the details about the instruction. For online instruction, the lesson plan may be written as a storyboard containing scripts to be used in the training. As the different components that make up the instruction are developed, communication with the faculty member teaching the course may take place or this could wait until the next phase, implementation.

Implement

It is during the implementation phase that learners begin to interact with the materials you have created and assembled, whether they are for online, face-to-face, or blended delivery.

In an online environment, communication is an important component. Learners who have questions need to understand what resources are available to support the learning effort. Several media choices exist for communication, such as Skype, text chatting, e-mail. If the course has been developed using a learning management system, such as Moodle or Blackboard, you may use discussions as a means for communication. As with other aspects of course design, it is important that response times are clearly communicated to the learner.

If face-to-face delivery has been selected as the delivery option, be sure to consider such details as parking, seating, and the learning environment itself. “Because libraries cross curricular lines, and promote student-directed learning, these spaces serve as models for needs-based, flexible learning spaces” (Farmer 2011, 118).

Part of the implementation phase involves testing the instructional components and activities through beta tests and pilots. For library instruction, the pilot may actually be offering the instruction to the class. Feedback gained from this pilot instructional session may be used to modify it for when it is offered again. For library guides, the feedback can be used to make changes to the guide. During this phase, communication with the faculty member and even students is paramount in gathering feedback to provide formative assessments of the instruction and learning objects. Feedback may also be gathered from colleagues within the library. During this phase of design, it is critical to measure learner comments against the materials being offered. This will aid in preparation for the final phase in the ADDIE process: evaluation.

Evaluate

Evaluation of instructional design is as much an ongoing process as the rest of the design approach. “Evaluation is used for the purposes of making judgments about the worth or success of people or things (e.g., lessons, programs, projects)” (Morrison, Ross, and Kemp 2007, 36). Three types of evaluation are generally recognized: formative, summative, and confirmative. Using formative evaluation assesses the learning design early in the process. Dick, Carey, and Carey (2009) report that studies “have demonstrated that simply trying out materials with a single learner and revising the materials on the basis of that data can make a significant difference in the effectiveness of materials” (p. 257) and relate five questions appropriate to this activity, including:

1. Are the materials appropriate?
2. Are the materials sequenced logically?
3. Are materials clear, and can they be understood easily?
4. Do the materials reflect the user-centered motivational qualities as represented by the ARCS model?
5. Can the materials be efficiently managed?

Answers to several questions may be sought during this phase. Questions such as: Did the training or library guide meet the state objectives? Did the instruction work or do what it was supposed to do? Were the sessions any good? Information evaluating the instruction or library guide may be gathered from the faculty member or from the students. The data and information gathered during the evaluation phase can be used to modify the

instruction for future sessions. A revision plan is created during this phase in which decisions about the time frame for revisions are made.

Shambaugh and Magliaro (2006) define summative evaluation as “usually tak[ing] the form of looking at student performance during an official grading period or at the end of the school year” (p. 255) or following a workshop. Although their criteria are phrased differently, the questions asked during the formative evaluation, above, offer a similar lens through which to view the results of the summative evaluation.

USE OF INSTRUCTIONAL DESIGN IN LIBRARY INSTRUCTION

The concepts of instructional design are included in the *ACRL Standards for Proficiencies for Instruction Librarians and Coordinators*. The standards are made up of twelve categories with category six comprised of instructional design skills, including collaboration with faculty to develop learning outcomes; presenting information in a logical sequence; creating learner centered instruction; assisting learners in assessing their individual skills and needs; designing instruction that is appropriate for the time and space allotted; producing instructional sessions that meet the characteristics of the learners involved in the instruction; and finally, integrating technology into instructional opportunities to support collaborative and experiential learning (Association of College and Research Libraries Instruction Section 2007).

So, what can a librarian do with the skills and knowledge of instructional design? By adopting and learning the skills of instructional design, librarians can become better instructors and create more efficient and effective instruction. The principles of instructional design may be used when developing any type of library instruction such as library guides, one-shot course specific sessions, and credit producing information literacy courses. It can even be used when creating training programs introducing new resources to staff members or training new staff. Instructional design techniques may also be used to create learning objects that can be stored in a repository and used multiple times. Learning objects can be shared among colleagues within an institution or even among academic institutions.

CONCLUSION

Utilizing instructional design principles in the development of library instruction in a variety of formats can not only facilitate the creation of efficient instruction, but also instruction that is more effective and meaningful for the students. Instructional design is just using a systematic method to design instruction. In order to use instructional design principles, librarians do not need to complete a formal educational program in instructional design.

Becoming familiar with the skills and knowledge of the instructional design process may be enough. Using models, such as ADDIE, will facilitate the creation of user centered instruction. The ability to create relevant instruction in a variety of formats from library guides, to one-shot instruction sessions to credit producing courses, will help to keep librarians at the center or heart of academic institutions. For librarians, the steps involved in instructional design are similar to those already undertaken when designing instruction or library guides. They are also familiar to librarians, because this systematic design thinking is comparable to the steps undertaken during a reference transaction or when a library professional helps to solve the information seeking problems of library users. Since many librarians learn about teaching after they have completed their program of study, they can take time to study and learn the principles of instructional design, learning theories, and other knowledge that can help to make them better instructors or even a blended librarian.

REFERENCES

- Association of College and Research Libraries Instruction Section. 2007. *Association of College and Research Libraries Standards for Proficiencies for Instruction Librarians and Coordinators*. Retrieved from <http://www.ala.org/acrl/standards/profstandards>.
- Bell, S. J., and J. D. Shank. 2004. The blended librarian: A blueprint for redefining the teaching and learning role of academic librarians. *College and Research Libraries News* 65(7): 372–375.
- Bell, S. J., and J. D. Shank. 2007. *Academic librarianship by design: A blended librarian's guide to the tools and techniques*. Chicago: American Library Association.
- Colborn, N. 2011. Introduction to instructional design: A brief primer. *Indiana Libraries* 30(1): 15–19.
- Dewald, N., A. Scholz-Crane, A. Booth, and C. Levine. 2000. Information literacy at a distance: Instructional design issues. *Journal of Academic Librarianship* 26(1): 33–44.
- Dick, W., L. Carey, and J. O. Carey. 2009. *The systematic design of instruction*. Upper Saddle River, NJ: Pearson Press.
- Farmer, L. S. 2011. *Instructional design for librarians and information professionals*. New York: Neal Schuman, Inc.
- Goodman, V. D. 2009. *Keeping the user in mind: Instructional design and the modern library*. Oxford: Chandos Publishing.
- Holderied, A. C. 2011. Instructional design for the active: Employing interactive technologies and active learning exercises to enhance information literacy. *Journal of Information Literacy* 5(1): 23–32.
- Jonassen, D. H. 2000. Toward a design theory of problem solving. *Educational Technology Research and Development* 48: 63–85.
- Keller, J. M. 2006. ARCS Design Process. *ARCS Model*. Retrieved from http://www.arcsmodel.com/Mot_dsgn_A_prsss.htm.

- Lo, L. S., and J. M. Dale. (2009). Information literacy “learning” via online tutorials: A collaboration between subject specialist and instructional design librarian. *Journal of Library & Information Services in Distance Learning* 3(3/4): 148–158. Retrieved from <http://www.learning-theories.com/constructivism.html>.
- Macklin, A. S. 2003. Theory into practice: Applying David Jonassen’s work in instructional design to instruction programs in academic libraries. *College and Research Libraries* 64(6): 494–500.
- Mager, R. F. 1997. *Preparing instructional objectives*, 2nd ed. Belmont, CA: David S. Lake.
- Morrison, Ross, S. M. and J. E. Kemp 2007. *Designing effective instruction*, 5th Edition, NY: John Wiley & Sons.
- Piskurich, G. M. 2006. *Rapid instructional design: Learning ID fast and right*. San Francisco: Pfeiffer.
- Posner, G., and K. Strike. 1976. A categorization scheme for principles of sequencing content. *Review of Educational Research* 46(4): 665–690.
- Shambaugh, N., and S. Magliaro. 2006. *Instructional design: A systematic approach for reflective practice*. Boston: Allyn & Bacon.
- U.S. Department of Health & Human Services. n.d. Usability.gov: Your guide for developing usable & useful web sites. Retrieved from: <http://www.usability.gov/>.
- Welty, G. 2008. Strategy and tactics for pilot implementation in the ADDIE model. *Journal of GXP Compliance*.

APPENDIX

Library Instruction (Guide) Planning Document Adapted from Piskurich (2006, 131–133)

1. Scope of Project (Focus)
 - a. Assignments related to the instruction:
 - b. Audience:
 - c. Course Description:
 - d. Course Title (For generic library guides, this may be a discipline):
 - e. Date of the instructional session(s) (if relevant):
 - f. Faculty member requesting instruction (if relevant):
 - g. Faculty or other library colleagues involved in the instruction:
 - h. For courses: time allowed for presentation
 - i. Location of the instruction (if relevant):
 - j. Number of students in class (if relevant):
2. Skills to be taught:
3. Concepts to be included in the instruction or library guide:
4. Objectives for the library guide or instruction:
5. Topical outline of the content to be presented (what information is to be included in the session / library guide):

6. Method (How is the instruction presented? One shot face to face, online, information literacy course, library guide)
7. Techniques to be used: (lecture, hands-on, discussion, demonstration, role play, self-instruction, video, games, other methods)
8. Problems or opportunities that may be encountered
9. For library instruction: materials or learning objects needed
10. Feedback: (who will beta test and provide feedback)
11. Evaluation plan: