instructional design

what is it?

Instructional design is a systematic approach to teaching and learning that makes use of current learning and teaching theory (Gangé, Wager, Golas, & Keller, 2005). The first step is to outline the measureable goals or objectives that represent the change in knowledge and/or behavior the teacher is seeking to help the learner develop. Next is the systematic design of a lesson often based on a particular instructional design model that provides a framework for the process. Finally, a feedback and assessment mechanism is built in so that corrections and improvements can be made based on learner feedback and performance.

Because of its roots in systems thinking, models that attempt to conceptualize the process are closely tied to instructional design. Well-known examples of these models are the ADDIE model and the Dick and Carey model (Gangé, Wager, Golas, & Keller, 2005).

how does it work?

Instructional design works by combining current knowledge on how humans learn with the constructivist approach to teaching as well as an understanding of how socio-cultural factors affect learning. Applying these facets together in a systematic way to the creation of lessons and learning objects is what makes it all tick (Rothwell & Kazanas, 2004).

It is helpful to walk through a summary of the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model in order to illustrate how it works.

- Analysis: In this initial stage of the process, a careful analysis of the lesson's target audience is completed. A thorough approach involves segmenting the learner group and considering the learner's needs in each case. Also, if the lesson or learning object is in collaboration with another faculty member or instructor, this person's interests and subject matter expertise should be consulted as well. The goal of the analysis stage is to develop clear and measureable learning objectives that make proper use of Bloom's taxonomy. One can use this opportunity to craft a project plan that sets timelines and identifies deliverables for the remainder of the project.

- Design: This is the stage in which concrete design choices are made based on the learning objectives and learner needs identified in the analysis stage. It is important to design the lesson plan or storyboard the learning object before jumping into any specific software or activities. Balance the desires of the ideal design with the constraints that will limit the development team. The results of the design stage should leave you with a defined lesson plan that builds off of the learning objectives.

- Development: After the completion of the first two stages you are now ready to start creating the lesson or learning object in earnest. Round up the needed software, tools, materials and/or team members and start putting the project together. The development stage often identifies unforeseen obstacles that may require some revision of the initial analysis and design stages. This feedback loop is important and will improve the final deliverable. Do your best to stick to the project-plan timeline.

- Implementation: Launch your learning object or teach the lesson you have been developing. If possible, include a pilot implementation phase that provides feedback for the developers and designers.

- Evaluation: The evaluation stage is critical to the conclusion of the project. Build in evaluation that assesses whether the learning objectives were met. Also, collect feedback on the learner experience and what could be improved in the next design iteration.

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further reading

Bell, S.J., & Shank, J.D. (2007). *Academic librarianship by design: A blended librarian's guide to the tools and techniques.* Chicago, IL: American Library Association.

Gangé, R.M., Wager, W.W., Golas, K.C., & Keller, J.M. (2005). *Principles of instructional design* (5th ed). Belmont, CA: Thomson/Wadsworth.

O'Neill, L. (2015, January 20). The making of an instructional design librarian [Blog post]. Retrieved from http://acrlog.org/2015/01/20/the-making-of-an-instructional-design-librarian/

Rothwell, J.W., & Kazanas, H.C. (2004). *Mastering the instructional design process: a systematic approach* (3rd ed). San Francisco, CA: Wiley.

Shank, J. D. (2006). The blended librarian: A job announcement analysis of the newly emerging position of instructional design librarian. *College & Research Libraries, 67*(6), 514-524.

Wiggins, G., & McTighe, J. (2008). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

who's doing it?

The trend for hiring academic librarians into the role of instructional designers was identified by John Shank (2006) as far back as 1999. The role continues to develop as evidenced by Lindsay O'Neill's (2015) blog post for the Association of College and Research Libraries *ACRLog*. Instructional Design librarians often go by titles such as Instructional Developer, Digital Learning Librarian, Blended Librarian, or Instructional Librarian. Librarians who deliver instruction as liaisons can take advantage of the design process to create more precise and measurable learning objectives. This also goes for librarians who develop instructional tools such as online learning objects. The team effort required to create high quality learning objects often benefits from the careful planning that the ADDIE model offers.

why is it significant?

Understanding the basics of instructional design can be helpful to instructional librarians because this knowledge is often reserved for those studying education. Some librarians learn about the process in school or in professional development but an understanding of the design process is not consistent across the profession. For example, there is currently a lot of momentum behind the concept of Backwards Design popularized by Wiggins and McTighe (2008), but this is still not a universally known concept in librarianship. Given that librarianship training does not always include a wealth of teacher training, instructional design creates a scaffold that can aid librarians on their teaching journeys.

Additionally, universities and colleges continue to develop their online course offerings so the process of instructional design will help librarians and their teams to develop high quality content that is both targeted to the learner and generating measurable outcomes.

what are the challenges?

There are some challenges associated with the rise of instructional design in librarianship. Instructional Design is a field in its own right in which graduate degrees are pursued. Questions that arise include: 1) to what extent should librarians seek instructional design credentials from within the librarian profession? And 2) what credentials are expected when hiring an instructional design librarian?

There also remains the need to identify within smaller teams of librarians which individual has sufficient experience or knowledge in instructional design to practice it. Although the greater challenge may be to develop a plan for how to catch staff up on instructional design in order to be able to meet the increasing need for librarians' roles in both the classroom and in developing online learning.

what are the implications for libraries?

Librarians are doing more and more teaching and, in some cases, are running entire courses on information literacy. Given this, the need for a more solid understanding of instructional design is clear. Significant benefits include improving both the delivery and assessment of instructional design but, more importantly, strengthening students' learning outcomes.

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