

Behind the Scenes: The Symbiotic Workflow in Creating a Higher Education Online Course

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Abstract: There is an increasing need for all concerned parties to work shoulder-to-shoulder with faculty members in designing online courses. In this paper, we report on the behind the scenes of creating a high quality online course focusing on the symbiotic relationships between instructional designers and instructor as well as the step-by-step workflow. To better illustrate this symbiotic relationship among stakeholders, we provide a workflow model as well as related documents and materials we use to assist faculty members in the creation of their online courses. We also provide examples of different types of symbiotic relationships while pointing out the challenges we have faced when working with faculty members. We also share the lessons we learned and some best practices we summarized through collaborative knowledge building. Last, but not least, we also highlight some practical strategies faculty members can use when working independently on designing online courses.

Introduction

With increasing demand for more quality online courses and learning experiences in higher education, more and more institutions of higher education are encouraging faculty members to offer online courses that satisfy such demands. However, it has been proven that creating a fulfilling online experience is a challenging and time-consuming effort, and not all faculty members are ready to venture down this path. Designing an effective online course requires a supporting team of instructional and graphic designers, who provide specialized skills and technical expertise. Therefore, the design of an effective online course becomes the collaborative effort between the instructors and the support team for a seamless and fruitful learning experience. This paper elucidates the behind the scene workflow that goes into developing an online course. It specifically focuses on the symbiotic relationship between instructional designers and instructor as well as the step-by-step methodology followed. To better illustrate this symbiotic relationship among stakeholders, we provide a workflow model as well as related documents and materials we use to assist faculty members in the creation of their online courses. We provide examples of different types of symbiotic relationships and share the challenges faced when working with faculty members. We also share

the lessons learned and some best practices summarized through collaborative knowledge building. Last, but not least, we highlight some practical strategies faculty members can use when working independently on designing online courses.

Symbiotic Workflow

Instructional Design

We work in an online course development office at a large, Midwestern, land-grant university in the US. Our office offers opportunities and grants to instructors in the College of Engineering and the College of Liberal Arts and Sciences for developing online courses. In addition to the monetary support, we also provide pedagogical, instructional and technological support to the instructors. Our course development team includes experts in pedagogy, instructional design, graphical design, and video creation and editing. As a team, we communicate, cooperate, and collaborate with faculty members and staff at our university to design, develop and deliver online courses.

As shown in Figure 1 below, we use an instructional design model adapted from the Analysis, Design, Development, and Implementation, Evaluation (ADDIE) design model.



Figure 1. Proposed Instructional Design Model

In the first phase, we work with our colleagues and instructors to conduct a front-end analysis. Together, we review key documents to understand the course, our instructors' and students' expectations and our own expectations. The documents we review together include course syllabi and schedule drafts provided by the instructor, statement of work, Quality Matters Guidelines, course objectives and outcomes, assessments and assignments. These documents help us make critical decisions on how to develop and deliver the course online that can help fulfill students' different learning needs and achieve the intended learning outcomes in an online learning environment.

Next, we begin our design and development phase. In this phase, an instructional designer is assigned to the course development and start working closely with the faculty member on creating a basic course structure, clarifying learning outcomes and assessment rubrics, aligning learning outcomes with assessments, creating

multimedia materials, designing a visual identity for the course and, last but not least, forming a design-based research plan. By the end of this phase, a prototype is ready for testing. As a group, we review the prototype. If needed, the instructional design plan is iteratively revisited. However, this does not mean that we only evaluate the course prototype at the end of the design and development phase. Formative evaluation is adopted throughout the process, which means our model is by no means linear and clear-cut. Our practical, agile model is fluid, spontaneous, and recursive. We provide ongoing formative evaluation, consultation and mentoring throughout the process. After several rounds of revision and redesign, as a team, we evaluate the course again internally to examine whether the specific online course adheres to the Quality Matters Guidelines. More revisions and redesign will be conducted based on other designers' ratings and feedback.

The continuous evaluation does not stop at this phase. To gather more feedback to improve our courses, we administer a pre and post questionnaire for students to fill out. Students' perceptions are crucial for understanding and improving our design, and help us immensely in identifying the strengths and weaknesses of the online courses. We analyze the data from the questionnaires, discuss them with faculty members and then make plans for the improvement of the course, if necessary.

Graphic Design

Graphic designer plays an important role in the design process of an online course. As graphic designers, we are working to improve the overall look and feel of learning management system (LMS) pages for the online courses we support. Creating a visual identity for the course greatly helps orient students in the course. We are also working to improve navigation and usability. Toward the goal of improving navigation and usability, we design icons to assist in understanding and to improve the feel, to make LMS feel more alive. These icons create a hierarchy for different modules and this helps in navigation by breaking up the user interface. Throughout this whole redesign of LMS, we create a consistent style, such as, a PowerPoint theme that mimics the look and feel of the course Blackboard page. This consistency adds to usability because it helps students to differentiate between their different courses, subconsciously sorting information by course, which would assist in learning.

Working with Faculty Members

In the following part, we will elaborate on three common relationship types we have with our instructors, such as *designer as mentor, faculty as protégé, designer and faculty as collaborators*; and *designer as a pair of helping hands and faculty as independent designer*.

Designer as Mentor, Faculty as Protégé

The nature of the relationship between the instructional designer and faculty is greatly shaped by the experience the faculty brings to the table. In early stages of collaboration, this relationship is reminiscent of mentor-protégé relationship, whose goal is to help faculty orient to the philosophy of online learning and teaching as well as to train them on how to use appropriate emerging learning technologies and how to incorporate them to their courses in an effective and efficient way. If the faculty is teaching an online course for the first time, the instructional designer is the expert who is knowledgeable about online learning and teaching, as well as various tools used to provide a seamless, effective online learning experience for learners. The faculty, unfamiliar with online teaching pedagogies and learning tools used to support, facilitate and enhance online learning, begins their journey as a protégé, benefiting from the instructional designer's experience while being the subject-matter expert and content expert. In the mentor-protégé relationship period, the instructional designer begin by introducing the faculty to a new philosophy of teaching and learning, and training them to use cutting-edge learning technologies. Then, the role of instructional designer shifts to scaffold the faculty while they are acclimating themselves to a new approach to teaching and learning and developing competency in using various learning technologies incorporated into online courses to provide an effective learning experience.

The Case

SPAN 324, Latin America Today, is a course offering contemporary issues on Latin American society, economic, politics, and culture. The course serves the needs of students who might work in Latin American countries in addition to those majoring in language and culture majors. The focus of the course is to present the current changes in the representative Latin American countries and have students familiarize with the Latin American culture.

The instructor of the course has been motivated by the affordances that online teaching offers to the teaching of language and culture. The design of the course started with a kick-off meeting in which the instructor and the instructional designer discussed the objectives of the course. Based on the objectives and explanations of the instructors, instructional guidelines were determined. Specifically, the instructor highlighted the importance of creating an environment allowing online students to have a sense of community at a distance. Thus, an instructional design approach embodying a communicative function has been adopted for the development of the course.

The instructional content was divided into five modules. Each module consisted of related readings, pre-recorded lectures, video journals, and discussions. Pre-recorded lectures were created through Camtasia screen-capture technology developed by TechSmith. Video-journals were developed so that students could watch a video related to the topic of the course and provide response for pre-determined questions. Video journals helped the instructor gain a more thorough understanding of how the students processed course content. As the instructor was able to get immediate responses and feedback from students in traditional face-to-face format of the course, she aimed for designing a similar environment in which students could express their ideas about the topics covered in the lecture videos. Moreover, the discussion forum provided a virtual space for students to communicate at a distance and discuss the contemporary issues.

The creation of the instructional materials was handled through the cooperation of the instructor and the instructional designer. The role of the instructional designer was to introduce the tools/software to the instructor and instructor was utilizing the tool. For example, Camtasia screen-capture technology was chosen for the delivery of the online lectures. However, the instructor had no experience using this technology. Therefore, the designer conducted a series of workshops for the efficient use of the tool. The instructor was able to use the tool after some trials. At first, some problems arose related to audio and editing, but gradually the instructor eliminated those issues. After the first online offering of the course, the instructor and instructional designer decided to create more collaborative tools so that students could communicate more at a distance. For this purpose, the instructor used VoiceThread in discussion forums. In this way, the students were able to leave audio/video comments on each other's entries. Presentation of discussions through VoiceThread allowed a more collaborative environment for students who needed more opportunities to communicate with their peers..

In conclusion, this course has been a model of instructional design in which the instructor and instructional designer worked as mentor and protégé. The design helped the instructor create a more collaborative online environment via online discussions, video journals, and VoiceThread discussions.

Designer and Faculty as Collaborators

It is immensely crucial to note that no instructional design endeavor can be successfully completed independent from the instructional designer. An effective online course with appropriate learner experiences has to be carefully crafted in a collaborative effort between the instructor, who is also the subject matter expert, and the instructional designer. This successful collaboration is not an easy feat, though.

Instructor in the Driver's Seat

The seeds of the collaboration are sown at the very first meeting with the instructor. The instructor is purposefully given the driver's seat and is allowed to share details about the course including strategies adopted, prospective methods of teaching and learning, and best practices according to the instructor. The main purpose of this meeting is to gather as much information as possible.

Shifting of the Balance

The following step that the designer assumes is that of a strainer. In subsequent meeting with the instructor, all of the information is analyzed, broken down into smaller segments and then prioritized. This is where the delicate balance between the instructor, with strong instincts of owning the content and its presentation, is gradually shifted to the designer, who takes charge of how the content is to be presented to best suit the needs of the online learners. This step includes many one-on-one meetings with the instructor where the designer explains his/her stands and decisions supported by scholarly evidence. This helps the instructor detach from the content and see the course with a different perspective. The instructor begins to reciprocate the feelings of trust in the relationship, which is crucial for the success of the collaboration between the instructor and the instructional designer.

The rewards

After months of building the mutual relationship of trust and respect for each other's expertise, the final piece that strengthens this bond is the creation of a successful online course. Positive student evaluations received after the completion of the course attest to the fact that the efforts of building a strong collaborative bond are not a futile activity. It helps design a successful online course, which is the overarching goal of both the instructional designer and the instructor.

The Case

ME 325, Mechanical Component Design, is a foundational course in mechanical engineering that is required in every accredited mechanical engineering program. The course contains a common core and dives into more specialized topics. We broke the course into three one-credit modules, each focusing on a specific subtopic. This allows students to choose to focus their studies on areas that are of specific interest to them, while still developing the skills common to all Mechanical Engineering students.

The instructor is tech-savvy and had lots of ideas for innovation throughout the development process. This created opportunities for pedagogic innovation, but also meant that expectations had to be managed. In practice, this meant explaining what the time costs would be and prioritizing ideas. The complicating factor is that in order to explain time costs of an approach, you must first know what they are. In these circumstances, keeping the instructor updated on what the cost of each approach should be the priority on our list.

The relationship between the instructor and the instructional designer was highly collaborative. We began the development process by holding an initial meeting in which we discussed our goals for the course and planned the initial stages of development. One of our graphic designers created a visual identity for the course and the instructional designer established a course website with common supporting materials such as information about how to use the course website, and how to find technical assistance. An initial round of course materials for the first two modules, and one version of the third module, was developed by the instructor. Throughout the process, the instructional designer and the instructor met twice weekly to plan and to coordinate specific course production activities such as video production.

Video production in particular required substantial coordination efforts, because videos were produced by the instructor, uploaded to the video storage service and placed in the course by the instructional designer. We created multiple short videos covering specific topics, rather than longer "lecture" videos, which meant that there were a lot of videos to keep up with. We used a spreadsheet to keep track of what videos existed, where they went and what their status was. Even with this spreadsheet, figuring out where videos belonged in the course was often difficult and time consuming. Pre-defined naming conventions might have helped to head off this issue.

Once we created a complete set of course materials, the instructor we worked on this project then piloted those materials with four advanced students, and worked one-on-one with them to ensure that they were able to meet the learning objectives, while development continued on a fully developed version of the course site. We then made edits based on the feedback from those students, and piloted the course with a larger group of students.

Designer as Helping Hands, Faculty as Independent Designer

Prior any course design process, it is crucial to share information regarding to the technical and pedagogical skills of both instructional designer and the faculty. In some cases, faculty can bring invaluable teaching experiences

to the course design process along with technical and pedagogical expertise. In such instances instructional designer would play a different role by exploring new approaches to the course design, making the existing design better by collaborating with the faculty on analyzing the existing content and presentation styles, and encouraging and assisting faculty in sharing successful implementation of their course management skills to other faculty through learning communities.

The Case

Latin 101, Elementary Latin, is a required course for students pursuing a Minor or Major in Classical Studies. This is a completely online course that uses Wheelock's Latin textbook and Blackboard Learn as LMS for content delivery. The content of this course is divided into five units. Each unit is in turn divided into chapters that correspond to the chapter in the textbook. Each unit opened with an overview that was intended to help students understand the overall learning objectives of the unit. Instructor had voice over PowerPoint lectures (approximately 7 to 10 minutes long) with closed caption in selected units to make it easy for students to understand the concept.

We began the development process two semesters before the course was offered. It started with an initial meeting with the instructor where we discussed the design of the course. The instructor had a clear idea of how the course should be laid out. She rarely requested instructional designers assistance except for occasionally consultation.

Graphic designer played an important role in this course, as the course is has it's own visual identity as compared to the other courses we offer. Instructional designer and the instructor interaction also played an important role as this course was a very text heavy. A biweekly meeting was set up to keep both instructional designer and instructor on the same page. An initial round of first three units was developed by the instructor and was organized on the course page with the help of an instructional designer. This content was then double-checked by a teaching-assistant (content expert) to make sure all the links and assignments (overall content) worked correctly, while the simultaneous development of other units.

Conclusion

Our proposed instructional design model revolves around continuous feedback and improvement with the purpose of designing and developing quality online courses through iterative cycles. Based on our experience, we believe that this cyclic model reflects the dynamic nature of the instructional design process, whereby instructional designers and instructors act in different roles to achieve the same goal: creating quality learning environments for students. In our case, this symbiotic relationship is reflected in three forms: *designer as mentor, faculty as protégé*; *designer and faculty as collaborators*; and *designer as a pair of helping hands and faculty as independent designer*. Depending on the level of the faculty's experience with online learning and teaching as well as the appropriate emerging learning technologies, the role of the faculty moves from a protégé, who is in need of continuous support of the instructional designer (mentor), to collaborator, and at last to an independent designer, who is competent in designing and developing an online course and in using various learning tools to provide a smooth, engaging learning experience for online learners.

Reflecting on our experience working with faculty members based on our proposed instructional design model, we believe that communication and coordination are the most important aspects of the instructional design process in order to ensure that the design and development of high quality online learning environments for learners in higher education is a smooth process in which both faculty and instructional designers are actively engaged, understanding and respecting each other's roles and responsibilities.