

# **Design4Online-A Unique Faculty Training Model at the University of Iowa: A Best Practices Report**

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### **Abstract:**

The Design4Online faculty training program is a successful training framework for online teaching faculty. The participants are instructors from different departments and colleges who teach online courses in ICON-a learning management system at the University of Iowa. Design4Online includes three main components that encompass instructor learning, course development, and community building. The eight-week training program utilizes the ADDIE model, Community of Inquiry (CoI) framework, Quality Matters (QM) rubrics, and data-driven research to ensure an effective development process, meaningful learning experiences, and training quality in the online educational environment. The Kirkpatrick Evaluation model was used to evaluate the training sessions and the overall training program. Both quantitative and qualitative methods were utilized to collect data from the participants throughout the training process to improve the quality of the training program throughout its initial implementation as well as future iterations.

## Introduction to the Training Program

Design4Online (D4O) is a faculty training program created by the instructional design (ID) team at Distance and Online Education at the University of Iowa. This comprehensive program assists instructors at all experience levels in designing or redesigning online courses through the implementation of best practices and leading online pedagogy. The overall goals of the program are to empower instructors to use data-driven and student-centered online teaching strategies, to design motivating course materials and media, to create engaging and accessible student learning experiences, and to align their courses with national quality assurance standards for online learning.

The D4O training program of 2018 consisted of four, face-to-face (F2F) training sessions and four online modules that enhanced and expanded the F2F meeting content. The participants had opportunities to complete skill development and course development exercises and to join one-to-one consultation meetings with the instructional designer for their online course development. Following the F2F and Online training components, the participants were encouraged to join and engage a community of practice titled 'Community of Learners'. This community of learners serves multiple goals, but the predominant ones included creating space for continued growth and support of online learning, to share and learn data-driven research and best practices for online course design, development, and delivery.

## Training Program Background

Distance and Online Education (DOE) at the University of Iowa offers students from across Iowa and around the globe the opportunity to attend distance and online programs. DOE's primary task is to collaborate with faculty to create effective online courses implementing best practices and online pedagogy that encourage transfer and retention of knowledge. Over the past two academic years, instructional designers at DOE have led the design of more than 239 new semester-based courses and course revisions. Enrollment during those academic sessions has grown consistently. During the Spring of 2016, a total of 12,909 students enrolled in online courses at the University of Iowa. This was up 26% from 10,249 in Spring 2014 (DOE Internal Enrollment Source, 2016).

As the enrollment numbers for online courses increase, it became imperative that DOE provide instructors knowledge, practice, and support in the development and implementation of quality online courses. To address this need, the instructional design team created the Design4Online program (D4O) to provide online instructors with data-driven research and best practices for their online course design, development, and delivery. With the support of Distance and Online Education and the University College at the University of Iowa, the first Design4Online program was created in early 2017.

## Methodologies

The D4O Training Program provides participants with opportunities to explore and engage with leading methodologies, frameworks, research, and best practices regarding online pedagogy. With D4O being the first training program at DOE, attention and dedication to finding seminal, current, and impactful data as well as effective practice/strategies was key. The ADDIE model, as cited in Kurt, 2017, was selected to guide the program development process as it is a widely used and respected framework for designing and developing educational and training programs. ADDIE can be broken into the following areas: Analyze, Design, Develop, Implement, and Evaluate. A strict linear process is not required by this model as it recognizes the need for the program development to be iterative. This approach is necessary as it clearly defines key stages which enables the ID to implement effective training tools to meet the goals of the training program (Kurt, 2017).

In addition, the IDs worked with the participants in using the Quality Matters (QM) Rubric, which is the leader in providing quality standards for online and blended courses. The QM Rubric helps to ensure online course quality and participants' success. Moreover, *Adult Learning Theories*, *Active Learning Methods*, and *the Community of Inquiry Framework* were applied to the training sessions with the expectation that the participants would be able to adapt and apply what they had achieved from the training program to their online teaching. Through the hands-on training sessions, F2F group activities, and online activities and discussions, the participants were able to simulate their online teaching activities.

## Training Program Format and Process

The program format consists of three phases as listed below:

### *Phase One: Training Effective Online Course Design*

The first phase provided training regarding effective online course design. Participants applied concepts learned throughout an eight-week training program to either the design and development of a new online course, or to the revision of an existing Distance and Online Education offering. The program included both face-to-face and online learning training. Trainings provided “How To” instructions, demonstrations, and modeling regarding best practices for online learning. It reflected the “I Do, We Do, You Do” gradual release model (Wheldall, Stephenson, and Carter, 2014) that employed practical application of the best-practice strategies. It also included data-driven research from adult-learning theory, multimedia learning theory, and the cognitive theory of multimedia learning. In addition, it implemented the backwards design process, peer-conversation, and reflection, as well as networking platforms to establish a community of practice around effective online learning.

### *Phase Two: Design and Development Support*

The second phase continued to support instructors through the completion of implementing their online courses that were begun in phase one. It was comprised of individualized meetings with instructional designers as well as support from other team members such as media and exams.

### *Phase Three: Building a Community of Practice*

The third phase was directed to building a community of practice. It included the instructor participating in three of the five community of practice engagement activities led by the instructional design team. The activities included the option to engage in face-to-face coffee shop discussions or online zoom meetings.

The program format was established through implementing the ADDIE Model to guide our process. The ADDIE Model is an iterative model that has five stages: Analysis, Design, Development, Implementation, and Evaluation.

1. Analysis Stage: To begin the development of the training program, a needs analysis survey was created and sent out to all online instructors at the University of Iowa. The purpose of the analysis stage was to get initial information from the instructors to create the training topics, timelines, and address facility needs for the training program. The ID team designed the survey and sent it out to the instructors in the Spring 2018. 171 responses were collected. The results from the initial survey could be summarized as the followings:
  - The number of faculty: 147 (Faculty: 82% and Adjunct: 16%)
  - Others: 24
  - Departments/Colleges: Wide spectrum of departments/colleges and programs at the University of Iowa
  - Online teaching experience: 25%
  - No experience as an online student: 69%
  - Training Topic Interests included:
    - *Alignment*
    - *Assessments*
    - *Instructional Strategies*
    - *Course Management*
    - *Evaluation*
    - *Engagement*
  - Preference Training Time: 1:00-4:00 on Thursdays

The training topics of interest were then broken into four specific training sessions that included two-week supplemental, online modules.

2. Design Stage: Since this was a new program and required a lot of preparation, the team then divided up into the following sub-program areas: Program Branding and Marketing, F-2-F Training Framework, Online Session Framework, Logistics, Evaluation, Certificate, and training content. Each ID member was in lead of working on one or two of the areas for the program. The ID team also chose an overall program lead that would oversee the entire program and sub areas. The ID team worked collaboratively and effectively to make the program work effectively. Each of the sub-program areas was detailed as follows:

- *Program Branding and Marketing*  
Worked with the Marketing Section at DOE and UI to advocate the D4O Training Program. Created a cohesive visual brand for D4O, created a D4O web presence, and created several print and email marketing materials. Although this was the first time to market the program, it was successful in creating brand awareness.
- *F2F Training Framework*  
Designed the F2F framework (e.g., lesson plans, agendas, teaching and learning activity supports, and methodologies). All the designed templates for the F2F session were presented to the ID team for feedback. The final template was consistently used for all sections throughout the D4O program.
- *Online Session Framework*  
Designed an online course for the D4O Training Program in ICON. The course structure, all the online module pages, and assignment page templates were presented to the ID team for feedback. The final page templates were consistently used throughout the D4O training program. The F2F framework and the Online Framework lead instructional designers collaborated together to make sure participants had a smooth transition from the F2F training session to the Online course site, as well as an overall cohesive experience that included a branding feel, topical connections and enhancements.
- *Logistics*  
Worked with sections in the DOE and other related departments at UI to accommodate budgets, application process, registration, facilities for the training program, recognition items, and other details for the D4O Program.
- *Evaluation*  
Established an evaluation process to ensure program training quality. The Kirkpatrick Evaluation Model was chosen to guide this process. It began with a pre-program survey that was sent out to the program participants to measure their general prior knowledge about each of the upcoming training topics as well as their general knowledge and experience with online pedagogy.  
At the F2F training sessions, a *Choose A Spot Activity* was implemented at the beginning of the training session to measure the participants' knowledge to the specific training topic. At the end of the F2F training session, a post-survey was distributed to the participants to measure their gained knowledge on the training topic.  
After the F2F training session, expanded and enhanced learning took place in the two-week online course. After each participant completed the online module, they were asked to complete the *End-of-Module Survey*. The survey helped the participants to assess their ability to apply what they had learned in each specific topic area. To exit the D4O training program, the participants were asked to take part in a *Post-Program Survey* to measure their achievement. This opportunity encouraged the participants to self-evaluate their individual progress and assess if they met the training goals. The survey results helped the IDs to evaluate the strengths and weaknesses of the D4O training program. It allowed for effective training adjustments as the program unfolded, as well as provided the IDs with feedback regarding necessary changes for future iterations of the training program. This has allowed the IDs the ability to maintain and improve the overall training quality of the D4O Training program.
- *Certificate*  
Designed and reviewed by the ID team as a way to congratulate and honor participants for the dedication to improving online courses. It was approved by the Associate Dean of Distance and Online Education. The certificate was signed by the Associate Dean of Distance Education and Outreach and the Associate Provost for Undergraduate Education and the Dean of the University College. The certificate was presented to the successfully completed program participants at the banquet.
- *Training Content*  
The D4O program provided the four following training modules: *Alignment, Assessments and Instructional Strategies, Engagement, and Course Management and Evaluation*. Each of the training topics were designed, developed, and delivered by two IDs. Each of the training topics were reviewed by the ID team and revised upon the ID team feedback. The IDs for each of the training topics rehearsed the

presentation with the ID team and other staff at DOE for feedback and made any necessary revisions prior to the actual presentation.

3. Development Stage: At this phase, the IDs used the data gathered from the earlier phases to create the training program. Each sub-program area lead took on the tasks of drafting, reviewing, producing and evaluating their specific areas content for the F2F training meetings, online modules, and the ID consult.
4. Implementation Stage: Design4Online training program has three main components that encompass instructor learning, course development, and community building. an 8-week hybrid course. The course included five bi-weekly face-to-face meetings where instructors and the DOE instructional designers addressed the six training topics. These three-hour meetings were complemented by required two-week online modules that enhanced and broadened the face-to-face content and provided activities for instructors to implement effective online pedagogy. The training content included research and design reflecting the Community of Inquiry Framework (Garrison, Anderson, & Archer, 2000) that addressed the critical learning occurring as experiences intersect between social, cognitive, and teaching presences.

*Each face-to face training* began by assessing the participating instructors' reaction to the training topics of that day via an engaging "Choose a Spot" activity. The activity provided peer support and encourages awareness, discussion and collaboration regarding the day's topic/s. The training session implemented the explicit instruction, gradual release model "I Do, We Do, You Do" (Wheldall, Stephenson & Carter, 2014) to successfully engage and support the participants in the online training content.

*The online environment* had specific modules for each face-to-face training session that enhanced and built upon the face-to-face training and collaboration with peers. It also provided each participating instructor deeper and more meaningful application of the knowledge.

*1-1 ID Consultations* involved the participating instructors and ID who provided individual course consultation. The ID and the instructor met on a weekly basis to support and transfer the learning of the face-to-face content and online modules to an instructors' upcoming online course.

*Learning Community* was developed to support the participating instructors. After the training was completed, the participating instructors were invited to join a collaborative community of practice. This community included the instructors and the instructional designers who continued to explore and create leading online pedagogy, practices, and research. The activities will include the option to engage in face-to-face coffee shop discussions or online ZOOM meetings.

5. Evaluation Stage: Evaluation was an iterative process. As mentioned above in the Evaluation area in the Design Phase, the D4O training program provided the participants many survey opportunities to evaluate their prior knowledge to the training program, during the training sessions, and after the program completion. The survey results helped the D4O Training Program evaluate strengths and weaknesses of the training program in order to maintain the training quality and to improve the training sessions and the whole training program for the next training cohorts.

The Kirkpatrick Evaluation model was utilized to design the surveys for the participants to measure their *Reaction, Learning, Behavior, and Results* regarding the D4O Training Program. The surveys were used to assess the participants levels of confidence regarding each of the training topics. The surveys used the following terms for measurement: *Very Confident, Confident, Undecided, Not Very Confident, and Not at All Confident*. The table below is a summary of those results. The first column indicates which of the four levels of criteria within the Kirkpatrick Evaluation Model is being measured. The second column indicates the percentage of participants who were either "*Very Confident*" or "*Confident*" prior to the training. The third column indicates the percentage of participants who were either "*Very Confident*" or "*Confident*" following the training program. *Table 1* shows the confidence levels about the training topics.

Levels	Pre-Survey Results	Post Survey Results
Reaction	17%	94%
Learning	41%	92%
Behavior	13%	93%
Results	20%	54%

Table 1. Confidence Levels

The following information will use the term “confidence level” to reflect the percentage of participants who indicated in the surveys that they were either “Very Confident” or “Confident” about each level of the Kirkpatrick Evaluation Model criteria. As an overview, the survey results from the pre/post program surveys showed that the confidence levels of the participants about the training topics increased sharply in each level of the Kirkpatrick Evaluation Model criteria. The *Reaction* criteria began at a 17% confidence level. After the training program, the confidence level grew to 94%, an increase of over 70%. The participants indicated prior to the training a *Learning* confidence level of 41%. The post-training survey showed the participants *Learning* confidence growing by over 50%, with a 92% confidence level score. The *Behavior* confidence level prior to training was 13%. The post-training survey *Behavior* confidence level was 93%, an 80% increase in confidence. The final criteria, *Results* was a bit more difficult to measure. *Results* criteria measures what participants accomplish post-training. The Design4Online had as part of its process, the development of a future online course by each of the participants. At the time of this training program report, not all future courses had been implemented, and many of the courses had not yet begun. Therefore, only partial data has been gathered regarding the *Results* level criteria. However, the current measurement for *Results* includes the pre- training level of 20% and a post-training level of 54%. This is a growth of 34%. This increase is a positive indicator of the final *Results* growth percentage. The final *Results* level will be measured and evaluated as the courses continue to be implemented and the data gathered.

In order to support the survey data, qualitative data from the participants through interviews, takeaways from the showcase, notes from the training program, and open-ended survey items were also collected and analyzed. The data were triangulated, categorized, and reflected the four levels: *Reaction*, *Learning*, *Behavior*, and *Results*. Below are some quotes from the participants:

*Reaction:* Nine (out of eleven) participants stated that the training program and content were “extremely useful, engaging and intensive, and incredible.” One of the participants indicated, “the instructional designers at DOE have really high standards; they will not allow you to end up with a bad product. They set the bar extremely high and inspire you to do your best.”

*Learning:* Nine (out of eleven) participants mentioned that they learned a lot from the D40 training program. One participant, for example, expressed, “I learned so much that I didn’t know before about the importance and value of alignment, varying assessment and instructional strategies...”

*Behavior:* All of the participants indicated to apply what they had learned from the D40 program to their online courses. For example, one participant said, “Participation in D40 changed my perspective of distance learning...” Another participant also valued the training program and expressed, “Design4Online was an engaging and intensive program that has allowed me to greatly improve the quality of my online class.”

*Results:* All participants completed the eight-week training program. Some of the early comments from instructors included their desire to continue to work with the instructional designers to build their course fully implementing what they have learned in the Design4Online training program. One participant expressed, “Thank you all so much for this wonderful course! It has completely broadened my horizons not only about online teaching but teaching more generally.”

### **Conclusion**

Over the past two academic years, the enrollment for online courses at the University of Iowa has grown consistently. The instructional designers at Distance and Online Education (DOE) recognized this growth and created a training program, Design4Online, to assist instructors by providing knowledge, practice, and support in the development and implementation of quality online courses. The Design4Online Faculty Training Program is the first of its kind at the University of Iowa. It is based on the ADDIE Model and includes data-driven research and best practices for online course design, development, and delivery. It is also implemented *Adult Learning Theories*, *Active Learning Methods*, and *the Community of Inquiry Framework*. The Kirkpatrick Evaluation Model provided an evaluation method for each of the training modules, the training process, and the overall training program. Quantitative and qualitative data were collected from the participants, analyzed, and reported in order to make any necessary changes to the content, the course, and the program for next training programs. The participants of the training program have shown great success in learning, applying, and providing results that indicate their ability to confidently and positively develop effective online courses has increased. Overall, the evaluation criteria of the Kirkpatrick Evaluation Model has grown at no less than 34%, with some areas growing over 50%. In addition, participants shared how much they enjoyed and appreciated the training program. One of our participants stated, “I loved it. I learned so much. I can’t wait to recommend it to all my faculty friends.”

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