

## **An Evaluation of Udacity’s “Intro to HTML and CSS” for Boilermaker Advertising Agency**

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### Audience and Context

Boilermaker Advertising Agency is a full-service advertising agency of 15 employees offering a wide range of techniques for communicating messages for their clients. Among these, they house a web development arm whose responsibility is to design modern websites for their clients. Their primary customer base is small-to-medium business, and they have been extremely successful, growing their revenue by 200% over the past two years. However, with this success, the stress placed on the web development team has increased to quickly build new websites for their increasing customer base. As this need has been identified, they have also found that their business in composing traditional radio and newspaper advertising has become considerably less lucrative, leaving many of their former content creators within those teams without a significant workload.

The four-person web development team has asked Boilermaker Advertising Agency’s leadership if they could hire new personnel to meet their demand, but there was no available budget for new staff remaining for this fiscal year. The manager of the web development team, while complaining of these issues to the manager of the newspaper and radio team, asked in exasperation if there was a way that she could simply grow more web developers. The newspaper and radio team manager, realizing the surplus of staff on hand, decided to investigate how he could provide some of his staffers as relief for the web development team – even though all six of them currently lack any significant exposure to basic web development skills. He had heard of Udacity through NPR, and decided that an evaluation would be necessary before committing his team to learning some of the entry-level skills they need through the tool.

If the use of the Udacity module is successful, Boilermaker Advertising Agency will be able to bring new web developers online while simultaneously showing a commitment to continued employee development. His intent is to exclusively begin with an introductory course rather than having his employees work through the entire Nanodegree Program – Udacity’s fee-based credentialed educational products (Nanodegree Programs | Udacity, 2016). The use of the free tools prevent any requirement for costs to be incurred by either the individual employees or by Boilermaker Advertising Agency, and the entry level nature of this module may provide the right amount of support for the team to begin their path towards competency.

### Instructional Product

Udacity states that their “mission is to bring accessible, affordable, engaging, and highly effective higher education to the world” (About Us | Udacity, 2016). Through “more active doing”, (About Us | Udacity, 2016) Udacity uses an online set of programming to enable students to create portfolios for a variety of engineering tasks. The course that the newspaper

and radio team manager intends to use is the “Intro to HTML and CSS” Udacity course. This course consists of the following components:

1. Lesson 1: From Design to Code
2. Lesson 2: Your Own Framework
3. Lesson 3: Learning and Using Bootstrap

Each of these modules uses a combination of video and written instructional materials to educate the learner on the designated topic. Drilling deeper into each of the modules, they are largely built around videos of less than five minutes, followed with multiple choice and coding quizzes. These miniature lessons present themselves using friendly language and are designed to be easily consumed in smaller bursts rather than forcing users to sit for a 30+ minute video lecture.

The goal of the course is to complete two projects: one, the portfolio project, will result in the creation of “a responsive website that will display images, descriptions, and links to each of the portfolio projects you will complete throughout the course of the Front-End Web Developer Nanodegree” and a data visualization project, which results in “a data visualization from a data set that tells a story or highlights trends or patterns in the data (Intro to HTML and CSS Online Course | Udacity, 2016).”

A key difference to note between the free version of the Udacity training product rather than the Nanodegree – in this case, part of their Front-End Web Developer certification (Nanodegree Programs | Udacity, 2016). An additional benefit of earning the Nanodegree certification is that it provides users with a certificate that they can place onto their LinkedIn professional profile, and can be used to verify competency to potential employers, rather than listing an individual course that was completed outside of a certification program (Van Norman, 2013).

### Instruments and Procedures

The nature of this evaluation has two primary objectives: first, to determine whether the audience enjoys the nature of the interaction with the Udacity learning platform; second, to confirm whether the employees achieved the described learning goals as set by the courseware. This falls in line with Levels 1 and 2 of Kirkpatrick’s Four Level Evaluation Model, which categorizes these, respectively, as reaction and learning (Kirkpatrick & Kirkpatrick, 2006).

### Measuring Reaction

Level 1, learner reaction, is critical for adoption of the training. If the newspaper and radio team does not enjoy the use of this Udacity course, it is unlikely that they would be willing to proceed in a meaningful fashion towards higher-level courses offered through that platform. In addition, as this training is to be conducted during normal business hours as part of ongoing employee development, negative user feelings towards this training could cause employee resentment towards future training efforts.

Reaction will be measured using a survey delivered to users for them to complete after they have completed the modules. It is recommended for this survey to be created using a tool such as SurveyMonkey to easily manage response data, and to allow for anonymous user responses. The survey must address all components of learner reaction to the courseware, including:

- Feelings towards the video-based instruction method;
- Feelings towards the instructors;
- Feelings towards the project activities, and;
- Whether they feel that this training has a bearing on the new skills they need to support the company.

One difficulty to note on this evaluation will be separating employee response towards their potential new roles as web developers rather than traditional advertising creators from the content itself. There is a high likelihood that employees who do not wish to deviate from their current daily responsibilities will be less satisfied with the training due to job dissatisfaction rather than a dislike for the training materials themselves. The survey questions include a comments section with an intent to allow for clarification.

Appendix A: Sample Udacity Reaction Survey, addresses these four components of learner reaction in a short survey designed to increase response rate. By using a shorter survey, there is an increased possibility of a larger percentage of respondents. This holds true across the Level 2 survey as well. The questions are ranked on a five point Likert scale, and should be rated at 5.0 as 100% satisfaction for each response. The response data should have a satisfaction rate above 4.5 for each item to confirm broad acceptance; below this threshold should result in re-examining the use of the Udacity platform and possibly seeking alternative delivery methods.

### Measuring Learning

Level 2, knowledge acquisition, is the second target within these levels of evaluation. Learners may feel either satisfied or dissatisfied with the Udacity tool, but the campaign will not be considered successful if the relevant staff members do not learn the new technical skills. The structure of this course creates a straightforward assessment opportunity. The two portfolio projects will be submitted to a group of subject matter experts within Boilermaker Advertising Agency's web development team, who use a checklist to see whether all learning was accomplished. The Udacity platform's testing will work in tandem with a second survey consisting of both Likert questions and short answer responses from the experts. Appendix B: Sample Udacity Learning Checklist, contains a checklist of questions that can be used to confirm whether learner perception matches expert-level assessment of the results of the projects.

### Reporting on Reaction and Learning

The data collected through both instruments should be collected through an anonymous tool to increase the likelihood of response. Reaction survey data should meet the threshold of 4.5/5.0

to consider the employees satisfied with the training, along with analysis of any comments for trends in emotional response. Survey comments should also be analyzed to look for trends across the verbatim feedback, and to determine whether individuals felt strongly about any component of the training. This data will also determine employee feelings towards their new responsibilities; this data should be collected into a written report for distribution to leadership. Pie charts are particularly recommended to display this data.

The learning confirmation will come from both employees stating their learning, and by confirmation of the data from the expert team. The expert team will need to spend significant time analyzing the code and design samples provided to them by the employees; it is also recommended that the experts take the course themselves. The intimacy of Boilermaker Advertising Agency means that a 100% response rate should be expected from the newspaper and radio team. The expert team is not going to be asked for this course whether they believe that the newspaper and advertising team is ready to move into full-time roles, as the courses specifically fall under an introductory level. If Udacity is found to be a successful tool for use in this capacity, subsequent assessments will be required to test full expertise. The expert team data should be presented in a written report based on their checklist grading.

## Works Cited

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## Appendix A: Sample Udacity Reaction Survey

Instructions: This survey is designed to measure your feelings on the “Intro to HTML & CSS” Udacity web development course. Circle the number corresponding to how much you liked or disliked that part of the training – 1 being the lowest, 5 being the highest.

1. The instructors in the videos were friendly and accessible.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
2. The portfolio projects were well-explained and easy to follow.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
3. The short quizzes were useful in confirming what I’d learned in the unit.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
4. The content was easy to access, and I could find what I was looking for quickly.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
5. I want to continue my learning on web development.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
6. I am excited to be working as a web developer.  
1 / 2 / 3 / 4 / 5  
Comment: \_\_\_\_\_
7. If you have any additional feedback that was not addressed by this survey, please include it here.  
Comment: \_\_\_\_\_

## Appendix B: Sample Udacity Learning Checklist

Instructions: This checklist is for the web development subject matter expert team to confirm the success of the “Intro to HTML & CSS” projects’ functionality and aesthetic. Circle Yes/No, and write in any feedback

Expert Name:

Student Project Being Evaluated:

1. The website can be viewed on devices of multiple platforms.  
Yes / No  
Comment: \_\_\_\_\_
2. The website is appealing to view.  
Yes / No  
Comment: \_\_\_\_\_
3. The website uses modern design principles.  
Yes / No  
Comment: \_\_\_\_\_
4. The website’s code is logical and well-organized.  
Yes / No  
Comment: \_\_\_\_\_
5. The website has clickable links that lead to a functional destination.  
Yes / No  
Comment: \_\_\_\_\_
6. Text and images are properly displayed.  
Yes / No  
Comment: \_\_\_\_\_
7. The website does not have any obvious failure points.  
Yes / No  
Comment: \_\_\_\_\_

The following questions are short answer responses; please provide additional detail only if your answer is a negative response.

8. Do you believe that this website could be published for public consumption?  
Yes / No  
Comment: \_\_\_\_\_
9. Do you believe that this employee could build additional websites?  
Yes / No  
Comment: \_\_\_\_\_
10. If you have any feedback not addressed by this survey, please include it here.  
Comment: \_\_\_\_\_