Gap Analysis Report and Curriculum Plan—Web Development

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Discussion of Findings

We focused our study on the differences/gaps between what the industry experts felt were important technical and employability skills and what our curriculum emphasizes. After completing the industry expert interviews and evaluating the course syllabi for our web specialization courses, we found gaps in the following Key Critical Work Functions.

A1: Gather data to identify customer requirements.
Generally, students are given the basic "customer requirements" within the case studies rather than collecting it on their own.
A6: Prepare preliminary application.
Within the courses, students complete projects which require them to prepare a preliminary application as they build the entire website as the project. Industry experts did not feel this was necessary. However, we are preparing students for entry level jobs within all sizes of organizations and they may or may not be required to be involved with this activity.
A7: Create and refine preliminary design/mockup.
Again, this is a basic component of the projects completed within the courses. If a student finds herself or himself working within a small organization, this is a necessary skill.
B5: Write supporting code.
Within larger organizations, working with web teams, the experts felt this was not a needed skill for entry level. However, our courses include the use of HTML and DHTML which are critical for anyone who designs and works with web pages. We are not teaching the higher level programming languages.
B6: Develop supporting databases.
The industry experts felt this was not necessary. But, because our students may be employed in small to large firms, database development is included within the curriculum.
D3: Perform application maintenance and D5: Document application/site changes.
These are gaps between the industry experts' advice and our curriculum. Our students do not get a chance to maintain web sites or document application/site changes as the projects involve just the creation.

D4: Recommend application/site improvements, E1: Evaluate and recommend web hardware, software and third-party solutions, and F3: Evaluate web technologies and standards. These were areas in which neither the experts nor our curriculum find this critical. Yet, for both parties it was an area rated "somewhat" critical. The level of experience would be dependent upon the size of company for which an individual worked and if he/she moved up within the organization.

Curricular Response

Based on the analysis, we will propose changes to strengthen our web development and administration curriculum. These changes will include, but not be limited to, providing more focus on data gathering and addition of documentation. Each of these is discussed in more detail.

Data Gathering
For the most part, students are provided this data as part of the case study for a given project. If students are to acquire a true understanding of the development stage, it is necessary they learn data gathering techniques in relationship to the customer's needs. As we are already having them research the content, it will be relatively easy to have them incorporate data gathering. These techniques are taught in ADMG 385, Business Communications, as a part of the report writing component.

Documentation
During our interviews with the experts, it became very evident that the need to be able to document a web site is critical. This is not a skill currently being taught in any of the web courses. Emphasis is placed on the creation, development, and implementation of web sites. Documentation of an initial site will be included in the projects students are expected to complete as part of the coursework. Furthermore, documentation of changes will be addressed within the coursework either through assignments or the project. As the level of web involvement will vary from job to job, students will at least have an understanding of documentation and basic usage enabling them to do documentation if and when needed.
Documentation will also enable students to learn and practice how to present technical material to non-technical people. Being able to converse technical terms with non-technical individuals is paramount to the success of our students in their future careers.

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