

Analysis Report  
A Dynamic Trio

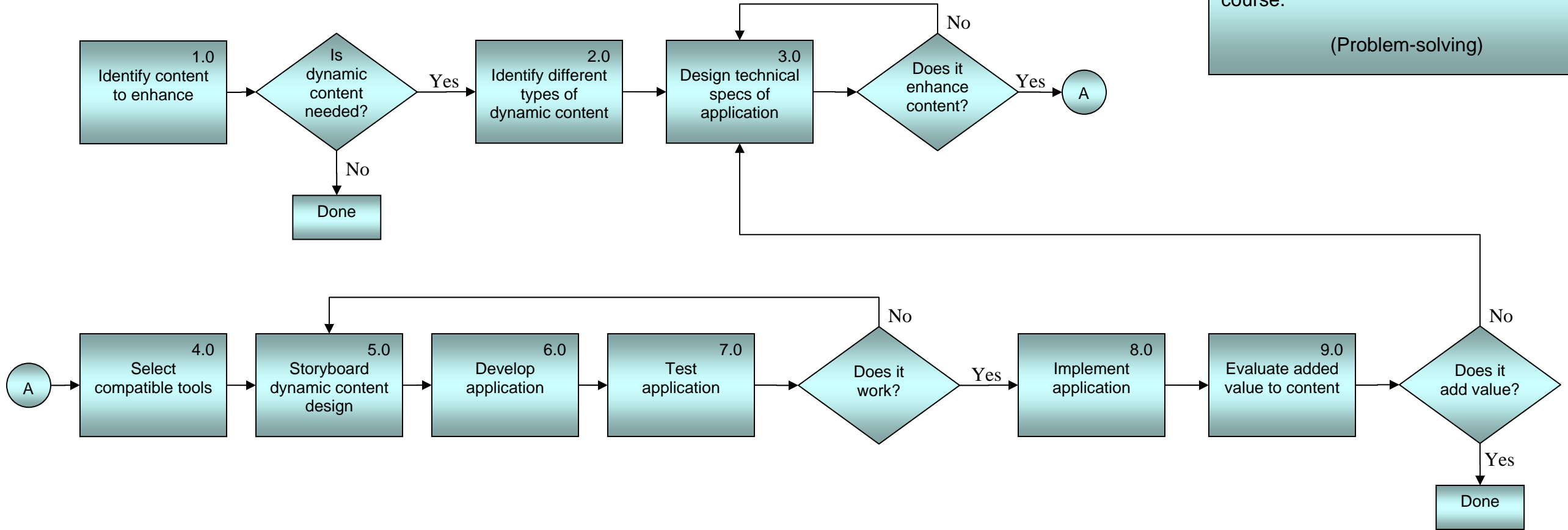
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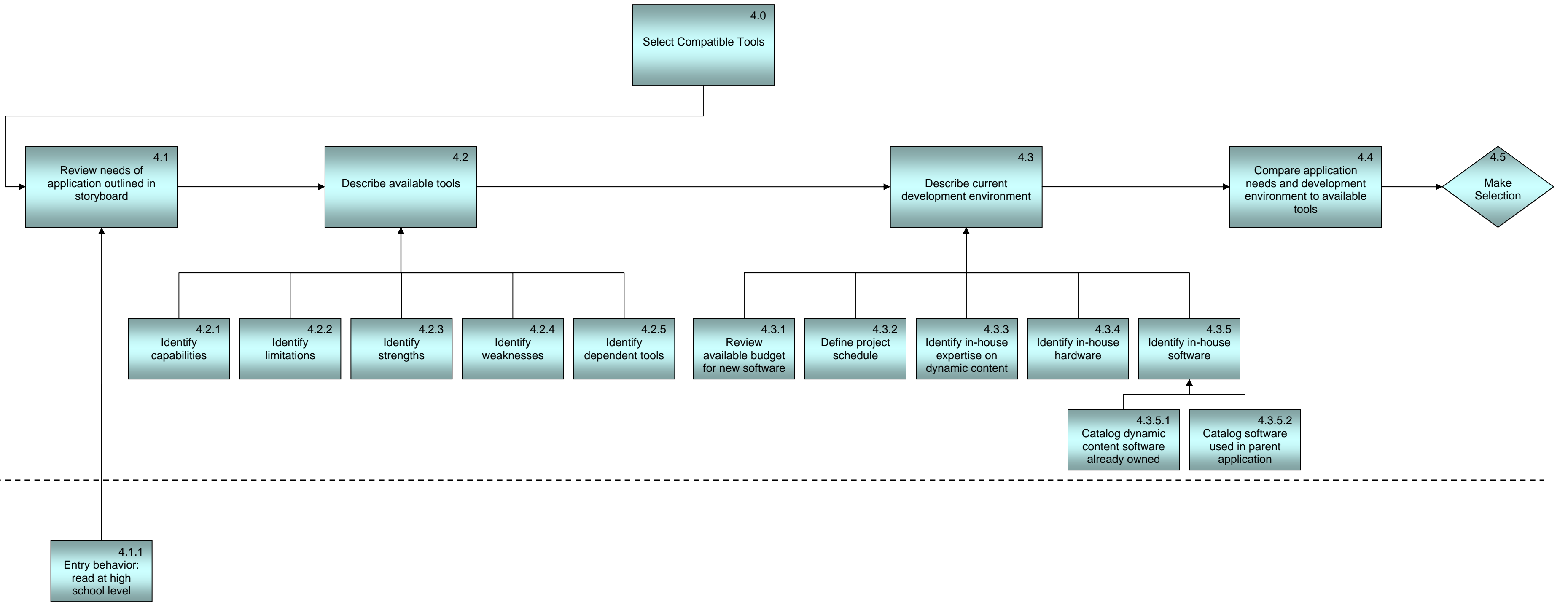
June 2, 2004

**Goal Statement**

Advanced web developers will analyze, design, develop, implement and evaluate dynamic content to enhance a web-based course.

(Problem-solving)





Learner Context Analysis			
Information Categories	Data Source	Learner Characteristics	Implications
Entry Behaviors	<b>Observed:</b> E-learning developers who develop web-based e-learning for commercial and military customers	<p><b>Relative to Course Content:</b> The course is targeted at experienced online course developers who may not necessarily have experience creating dynamic content. As experienced developers the learners will have already developed the appropriate vocabulary, expertise in general computing skills, and expertise in general web design. Although not all will be familiar with the programming languages and applications discussed in the class; all will understand the context (web design) in which the languages and applications are utilized.</p> <p><b>Relative to Delivery System:</b> As experienced online course developers, all members of the learning population will have some experience with online learning. All will be experience with using the Internet.</p>	It is important to begin the class with a pre-test, to ensure that all participants possess the entry behaviors.
Prior Knowledge of Topics	<p><b>More information needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the learners' attitude toward content information.</p>	<p>More information needs to be collected.</p> <p><b>Hypothesis:</b> Learners will have varying levels of knowledge of the topic. All of the learners have created static web content and will be familiar with one, some, or all of the programming languages and applications discussed in the course; however, most will probably not be familiar with the analysis and design portions of the course.</p>	<p>Knowledge of the tools covered in the course will vary between students. Content should be modular in nature in order to allow students to skip over instruction for tools they already know. Individuals should be able to assess their knowledge of the development tool modules.</p> <p>Additional resources should be provided for students wishing to go beyond the scope of the course in the tools they already know. Also, links to external reference sources for each tool should be provided.</p>
Attitude Toward Content Information (ARCS)	<p><b>More information needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the learners' attitude toward content information.</p>	<p><b>Attention:</b> Since most learners are taking this course voluntarily in order to increase their own skill set, and because for the majority of students this content is applicable to their chosen profession, the nature of the content will hold their attention.</p> <p><b>Relevance:</b> Since learners will be applying these skills in their daily work, they will clearly see the relevance of the content.</p> <p><b>Confidence:</b> Learners may have varying degrees of confidence in their ability to learn the content, or in their ability to apply the new skills in their daily work.</p>	The typical learner keeps up-to-date on current technologies, so the content must be as current as possible, especially since technology changes so rapidly. Emphasis should be placed on the correct use of dynamic content to enhance existing content instead of simply to add "bells and whistles."

		<p><b>Satisfaction:</b> The learners will only feel a sense of satisfaction if they are able to apply the new skills to their daily work.</p>	
Attitude Toward Delivery System (ARCS)	<p><b>More information needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the learners' attitude toward the delivery system.</p>	<p><b>Attention:</b> Since the learners are very in-tune with web-based e-learning, the chance to take this course on-line will probably attract their attention.</p> <p><b>Relevance:</b> Since the delivery method is so closely tied to the content itself, learners will easily see the relevance of the delivery system.</p> <p><b>Confidence:</b> Web developers who spend the majority of their time developing web content should feel right at home with the web-based delivery system. However, some who have never taken an on-line course may be somewhat apprehensive.</p> <p><b>Satisfaction:</b> Learners will probably feel a sense of satisfaction with the delivery system as long as they can see their progress through the course.</p>	<p>Some students may never have actually taken an e-learning course, or a web based course, so the content must include instructions on how to proceed through the courseware. There should be an optional "getting started" section that is formatted as a traditional web page, so that the learner will have a familiar starting point.</p> <p>Flexibility should be built in to allow learners to learn at their own pace.</p> <p>Course progress should be clearly displayed for the learner.</p>
General Academic Motivation	<p><b>More information needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the learner's general academic motivation</p>	<p>More information needs to be collected.</p> <p><b>Hypothesis:</b> Motivation would vary between different learner subgroups. For example, if this course were offered at a vocational college, the population would probably be comprised of volunteer learners. However, another probably setting could be for a large web design company, where the learners (a.k.a. employees) were required to attend. Each subgroup should be analyzed separately.</p>	<p>In some cases, motivational incentives may need to extend outside of the course; for example, management may need to offer employee incentives.</p>
Educational and Ability Levels	<p><b>Observed:</b> Same as above</p>	<p>Learners will have varying education levels. All will be high school graduates. Some may have undergraduate or even graduate degrees in a related field, while others may have no higher education.</p> <p>Regardless of education level, all learners will be competent web developers and will have a firm understanding of web development tools and techniques.</p>	<p>Learners will have varying levels of education, so the content must be written to the lowest expected level. Any mathematical concepts should be fully explained. Content should be written at a 12th grade reading level or lower.</p>
General Learning Preferences	<p><b>More information needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the learning preferences of the general learner population.</p>	<p>More information needs to be collected.</p> <p><b>Hypothesis:</b> Learners will have varying learning preferences.</p>	<p>Course should present the content using a variety of methods to accommodate all students.</p>
Attitudes Toward	<b>More information</b>	This course will be developed and	

<p>Organization</p>	<p><b>needs to be collected.</b></p> <p>Interviews should be conducted, initially, to determine the attitude of the general learner population toward the organization.</p>	<p>offered by the University of Central Florida. UCF is recognized as an established and accredited state university. Students will feel confident taking this course.</p>	
<p>General Group Characteristics</p>	<p><b>Observed:</b> Same as above</p>	<p>The target learners form an extremely heterogeneous group. They will be both male and female, from any adult age group, and they will have varying educational backgrounds. Because this courseware is web-based, they may be located in any part of the country, or even internationally.</p> <p>Since the group consists of experienced developer, it is likely that they are all employed and might have families and other commitments. Convenience (in regard to location and time) will be very important.</p>	<p>This courseware will be available internationally through the internet, so it should the content should be available in several languages. In addition, a glossary of key terms should be included.</p> <p>Since learners are probably working adults, lesson times should be flexible, as much as possible.</p>

Performance Context Analysis			
Information Categories	Data Source	Performance Context	Implications
Managerial/Supervisory Support	<b>Observed:</b> E-learning developers who develop web-based e-learning for commercial and military customers	Web developers usually work for organizations who want to stay on the bleeding edge of technology and encourage their staff to research and learn new technologies. Their supervisors may not always have full understanding of all available technologies but trust their developers will. In a corporate setting managerial buy-in would be important for motivation and satisfaction.	Incentives may be needed for corporate settings to reassure management that the skills taught will be valuable. Student could be offered a certificate of completion, which would help justify the course to managers.
Physical Aspects of Site	<b>Observed:</b> Same as above	E-learning developers generally work in an office environment. They should have access to a computer workstation that usually meets current performance standards. They may also have access to many different development tools and references. The typical office environment supports the needs of the course.	
Social Aspects of Site	<b>Observed:</b> Same as above	E-learning developers generally work independently on their own portions of projects, but they also coordinate with instructional designers, SMEs, and graphic artists. This team environment will need to be simulated.	Since the learner will not have to opportunity to work in a team environment, the courseware must act as the ID, SME, and graphic artist. Examples must include instructions, technical information, and graphics.  In addition, a "Virtual PM" feature would act as the project manager, tracking errors and providing feedback.
Relevance of Skills to Workplace	<b>Observed:</b> Same as above	The skills learned in this courseware will have a direct impact on the work produced by the learner. They will enable web developers to enhance the quality of the work they already do and make it more scalable.	Skills must be taught in a way that can be applied to real world situations. Examples should be realistic.

Learning Context Analysis			
Information Categories	Data Source	Performance Context	Implications
Number/Nature of Sites	<b>Observed:</b> E-learning developers who develop web-based e-learning for commercial and military customers	<p><b>Number:</b> This will be a web-based course. The number of sites will be equal to the number of students enrolled.</p> <p><b>Facilities:</b> Learners will be able to access courseware from any location with internet access. They will most likely access courseware either from home or from work. Facilities will vary according to what is available at each student's home or workplace.</p> <p><b>Equipment:</b> Equipment will vary according to each student. Students should have a dedicated computer with internet access they can use on a regular basis to access content and complete assignments.</p> <p><b>Resources:</b> The course will need a dedicated instructor to provide feedback to students, answer questions and evaluate work.</p> <p><b>Constraints:</b> Learners may have limited time if accessing courseware at work. Times at which students will be able to access content will vary depending on their schedules.</p>	<p>A reliable web server and 24/7 tech support is needed.</p> <p>Minimum hardware, software and time requirements for completing the course should be clearly articulated to students prior to registering for the course. Where possible, access to software and resources or alternatives should be provided.</p> <p>Learners may have limited time to access courseware, so lessons need to be built in small self-contained chunks.</p>
Site Compatibility with Instructional Needs	<b>Observed:</b> Same as above	<p><b>Instructional strategies:</b> The course will be taught through presentations and practice exercises, which can both be presented over the internet.</p> <p><b>Delivery approach:</b> The delivery approach is compatible with the instructional needs because all that is needed is a PC with the established capabilities.</p> <p><b>Time:</b> Presenting this course over the internet allows it to be self-paced.</p> <p><b>Personnel:</b> An instructor is required to facilitate learning and provide feedback. In addition, some support technicians may occasionally be needed to troubleshoot problems and for courseware maintenance.</p>	<p>With such limited contact, the instructor will need be very diligent, timely, and project his/her personality across the online course format.</p> <p>Exercises must be designed to be realistic, but also achievable by the student.</p>
Site Compatibility with Learner Needs	<b>Observed:</b> Same as above	<p><b>Location:</b> Learner will be able to complete course from the comfort of their own home or any other location of their choosing that provides a computer with internet access. All of the learners' workplaces and homes are assumed to have internet access.</p> <p><b>Conveniences:</b> Learner will have access to many conveniences they choose since they can choose the location.</p>	<p>Minimum hardware and software requirements should be clearly stated to ensure students have everything needed to successfully complete the course.</p>

		<p><b>Space:</b> Space is not a concern as long as the learner has adequate space for a PC.</p> <p><b>Equipment:</b> Will vary by student depending on what is available to them at home or at work. PC will have to meet certain minimum system requirements.</p>	
Feasibility for Simulating Workplace	<p><b>Observed:</b> Same as above</p>	<p><b>Physical Characteristics:</b> The courseware will not only simulate the work environment, but in some cases they will be the same. Some students will complete the course at work on the same PC that they will use to apply the skills at work. In cases where the student completes the course at home, all that will be needed to simulate the workplace is a PC with similar characteristics.</p> <p><b>Supervisory Characteristics:</b> The courseware will simulate the supervisory characteristics in that the courseware will give assignments, assign deadlines, and provide feedback on the student's work.</p> <p><b>Social Characteristics:</b> Social characteristics are more difficult to simulate, since in practice the developers will work with other specialists (SMEs, IDs, graphic artists, etc.) in a team environment. The courseware will attempt to simulate this by providing necessary design standards, technical information, and graphics throughout the exercises. In addition, the Virtual PM will simulate the role of the project manager, giving assignments, assigning deadlines, and providing feedback on the student's work.</p>	<p>The courseware will have to simulate the supervisory and social aspects of the workplace. The Virtual PM feature will simulate the role of the project manager, giving assignments, assigning deadlines, and providing feedback on the student's work. The courseware must also act as the ID, SME, and graphic artist. Examples must include instructions, technical information, and graphics.</p>