

INSYS 441 Final project

Instructional Design & Technology Self-learners' Support Website

<http://www.personal.psu.edu/tuf105/KB/>

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Overview of the project

There are lots of learning resources or related information of instructional design & technology on the Internet. However, it is difficult for introductory-level learners to select a topic to start from. It is also difficult to set an appropriate study plan that matches each learner's needs.

To address such problems, we developed a website including a series of study support tools for the introductory-level learner of instructional design & technology. By using the website, learners will be able to find learning resources that suite their needs and effectively start their self-learning.

Description of the learners/audience

Main target learners of the project are the following:

- School teachers, administrators, and novice instructional designers, who are interested but do not have opportunities to learn about instructional design & technology.
- Graduate students who are studying instructional design and technology in the introductory level.

Description of the larger context

Due to the rapid evolution of information technology, the variations of education style are increasing. Not only experts of instructional design, but also school teachers and administrators need to have instructional design & technology to a certain degree. However, it is difficult for them to study in a graduate program while they are working. Learning opportunities that are available for them are scarce. If they have learning resources which they can use for their self-learning, they can learn and utilize the knowledge in their work.

We selected learning resources and categorized them in five topics where the learners can relate their needs and concerns to the learning domain. The topics are as the following:

- Internet search & evaluation: How to find and evaluate the Internet resources by using search engines
- Learning theory: Basic learning theory related to instructional design and technology.
- Instructional design: Basic Instructional design concepts and processes
- Technology in the classroom: Basic concept and related issues on Technology in the classroom
- Online distance education: How to develop and utilize an online learning environment

Identification of the problems

As there are many learning resources on instructional design & technology, people can learn by themselves to a considerable extent. However, it is difficult for introductory-level learners to start their self-study because of the following problems:

- Internet resources are not necessarily organized and many of them require some prerequisite knowledge to understand.
- Some learners do not know how to find learning resources and/or evaluate them whether they are credible and appropriate.
- Instructional design & technology topics are broad and are difficult to select a topic one should start studying from.
- It is difficult for introductory-level learners to understand basic concepts of instructional design and technology by information provided from only one Web site. One web site is not enough to understand the general idea about instructional design & technology. They need to refer several resources.

Description of proposed solution

The website provides learning support to address the problems described as above. The learning support includes solutions as the following:

- The learning resources on the website are carefully selected and organized by topics so as the learners can easily find the materials which they need. The resources used in the website were examined with the following criteria.
 - Provided by educational institutes, researchers, or specialists of the subject. Anonymous web sites are excluded from the resources.
 - Recommended or referred by current researchers or students of the subject.
- Study advising function (Study Planner) is provided for the learners to specify their own learning needs within the subject. By taking diagnostic test to assess the learner's needs and concerns, learners will receive recommended lesson plan.
- To assess the learning outcome, exercise materials are provided for each lesson.
- A learners' evaluation form is provided so that the project member can improve the website according to the learners' feedback

Analysis of media options

The website includes some interactive features. The functions of the Web, such as JavaScript and flash, are suitable for our needs. As the purpose of our project is to diffuse the knowledge of instructional design & technology for educators, accessibility to the Web serves best for our purpose than any other alternative media.

The theoretical foundations at the root of this idea/problem

We considered three theories as the theoretical foundations of the project.

1. Electric performance support system (EPSS): EPSS is an electrical system which provides information resources, advice, learning experiences, and tools so that users can perform a task (Wager & MaKey, 2002). Our website provides learning support based on the concept of the EPSS.

2. Carroll's Minimalist theory: The core concept of this theory is to minimize the extent to which instructional materials obstruct learning and focus the design on activities that support learner-directed activities and accomplishment (Kearsley, 2003). Our website support learners to reduce unnecessary time in the learning process by providing learning resources and activities in an effective manner.
3. Gagne's nine events of instruction: We referred Gagne's theory to make sure that the instructional process of the website is appropriate.

The instructional methods or strategies

To ensure the appropriateness of the overall instruction process, Gagne's nine events (Gagne, et al, 1988) were used in the project. Instructional methods and strategies used in the website are organized according to the Gagne's nine events framework as the following.

Event of Instruction	Instructional methods or strategies
1. Gaining Attention	<ul style="list-style-type: none"> - Title of the website is displayed in a prominent place on the top page. - Rollover icons are provided to explore the website in ease.
2. Informing the Learner of the Objective	<ul style="list-style-type: none"> - Purpose of the website is stated on the introduction page. - Learning goals are stated on each lesson page.
3. Stimulating Recall of Prior Learning	<ul style="list-style-type: none"> - Advising tool stimulates learners' learning needs.
4. Presenting the Stimulus	<ul style="list-style-type: none"> - Different fonts and colors are used - Several images are used
5. Providing Learner Guidance	<ul style="list-style-type: none"> - Advising tools are provided to specify learning needs. - Contents sequence is carefully structured to guide learners appropriately.
6. Eliciting Performance	<ul style="list-style-type: none"> - Quizzes are provided to assess the learning outcomes for each lesson.
7. Giving Feedback	<ul style="list-style-type: none"> - Feedback is instantly provided for the learners' answer on the exercise.
8. Assessing Performance	<ul style="list-style-type: none"> - Score is displayed right after finishing the quiz.
9. Enhancing Retention and Transfer	<ul style="list-style-type: none"> - Resources for further learning can be used to enhance retention.

References

- Gagne, et al. (1988). The Events of Instruction, *Principles of Instructional Design*, pp.177-197. Holt, Rinehart, & Winston
- Kearsley, G. (2003). Minimalism (J. Carroll), *The Theory into Practice Database Website*, Retrieved on April 20, 2003, from The Theory into Practice Database Website: <http://tip.psychology.org/carroll.html>
- Wager, and McKay. (2002). EPSS: Visions and Viewpoints, *Trends and Issues in Instructional Design and Technology*, pp.133-144. Prentice Hall.

Instructional Design & Technology Self-learners' Support Website

User Guide

URL: <http://www.personal.psu.edu/tuf105/KB/>

Overview of the website:

Instructional Design & Technology Self-learners' Support Website is created for the introductory-level learners of instructional design & technology. The website provides a set of support tools including learning resources, study planning support, and exercise materials.

Contents

Introduction (for first time visitors)

Please visit this page first.

You would understand the purpose and features and learn the basic tips on how to explore this web site.

Study Planner:

By answering the diagnostic test, your study plan will be generated.

Resource Directory:

You will find good learning materials on this page.

Exercise:

When you finish your study, let's try the quiz.

Feedback to the Web master:

If you have a comment about this Web site, please send us some feedback.

Site map:

About us: Brief information about the project members.



Homepage

Basic Tutorials

We suggest two ways of using our web site:

A. Exploring the resource directory according to your study interests

The resource directory is in order according to the knowledge domain and terms.

If you are familiar with these terms, this is an easy to find what you want.

B. Digest your study interest by using the Study Planner

We provide a digestive test to connect your study interests to recommended learning materials. If you are not sure what your study interest is, the Study Planner can help you.

Required environment

This Web site's technology is quite simple. We have not used special plug-in or functions. However, the resources that we linked might require some. We recommend the following environment:

- Browser: Internet explorer 5 or higher; Netscape 5 or higher
- Audio device (Speaker)

Tips

- The link to outside resources is set to open a new window. It is convenient to keep this Web site open during exploring outside resources. You can easily come back and try other resources.
- As we have not provided note taking tools, we recommend you to open a notepad or word processor software when you explore the resource directory
- If you find the resources we introduced not enough sufficient to your needs, please give as some feedback. We will try to address to your needs on our future update.

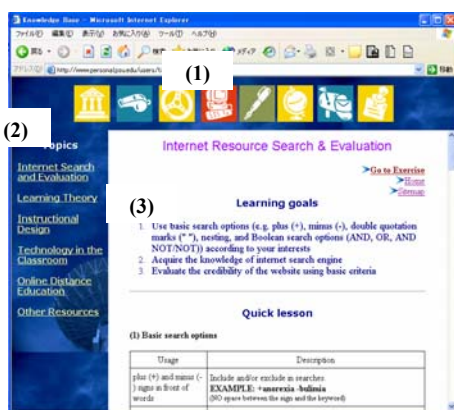
How to use the tools

1. Study Planner

Objectives	Not interested	Interested	Not interested
1. Improve internet search skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Acquire the knowledge of internet search engine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Learn how to evaluate credibility of the website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Understand more about how people learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Learn the learning theories which support my teaching or learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Acquire basic knowledge to enhance the effectiveness of my teaching or learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Develop effective instructional materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Acquire knowledge to improve my instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Understand the history of instructional design development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Know what kind of technology I can use in my classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Acquire the knowledge to integrate technology in classroom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

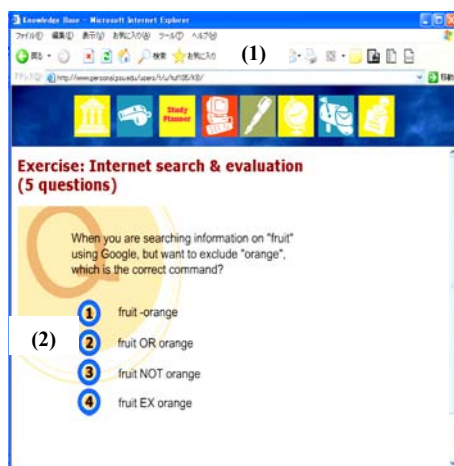
- To access the Study Planner, click on the third icon from the left on the Homepage (1).
- Answer the 15 questions by clicking the applicable options (2).
- After finish answering, click the submit button.
- The result window will be pop-up. The result shows recommended lesson plan according to your answers.
- By clicking the lesson name, lesson materials will appear on the previous page.

2. Resource Directory



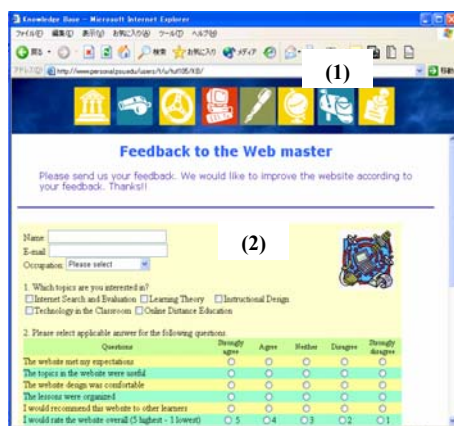
- To access the Resource Directory, click on the fourth icon from the left on the Homepage (1) or click the lesson name on the Study Planner result.
- Resources are categorized in five topics (2). You can choose and click the topic as you like.
- Learning goals and quick lessons are provided on each topic page (3).
- After your lesson, go to the Exercise page and assess your learning outcome.

3. Exercise



- To access the Exercise, click on the fifth icon from the left on the Homepage (1) or click the “go to exercise” link from the each topic page in the Resource Directory.
- 3 to 5 quizzes are provided for each topic. To answer the question, just click on the number (2).
- Answers are displayed instantly. If your answer is incorrect, you can answer again or go to next question by clicking the “Next” button.
- After answering all questions, the score will be displayed. After checking the score, move on to the next topic or other pages (The score can not be saved).

4. Feedback to the Webmaster



- To access the Feedback to the Webmaster, click the sixth icon from the left on the Homepage (1).
- Answer the questions by clicking the applicable options (2).
- After you finish answering, click the submit button.
- The feedback will be sent to the webmaster directly.
- Your feedback will be considered for future improvement of the website.