Teaching Tip

The Learning Log

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ABSTRACT

This teaching tip deals with the use of a learning log in an information systems security class. This technique supports the *individual topic expert* teaching tip contributed by Denise R. McGinnis. A learning log is a tightly focused academic journal that is created as the student becomes knowledgeable on an individually assigned topic. The log can serve as the basis for generating Frequently Asked Questions (FAQs), support class discussion, and provide the basis for the creation of a class presentation and web site.

Keywords: learning log, journal, FAQ, information systems security, topic expert

1. INTRODUCTION

An information systems security course is the type of course where the contents change rapidly due to both technological changes and security related news events such as a major Internet intrusion. Denise R. McGinnis proposed a technique that can lighten the instructor's load and enhance student learning. It is the *individual topic expert*. Each student is assigned a different topic to research. The learning log technique can be used as a tool in the process of becoming a topic expert. As the student researches the assigned topic over an extended period of time, a learning log (Figure 1) is created using a word processor. The log documents the student's learning experiences. The log shows the date of the learning experience, the source of the learning experience (web site, journal, interview, etc.), and the actual learning and insights the student experienced. The log captures questions that come to mind and describes how much time was spent in the learning event. Comments in the log can document what the student expected to be learned from a particular source, what was learned that was unexpected, and difficulties or disappointments the student encountered in the learning experience. It can also record anticipated future steps to take in the research.

2. LEARNING LOGS PROVIDE VALUABLE INSIGHTS

A learning log can be used for a number of purposes. A learning log can serve as an ongoing laboratory notebook for learning. Diagnostic learning logs provide faculty with information and insights into a student's awareness of and skill at identifying strengths and weaknesses as a learner. The teacher can scrutinize a student's metacognitive skills, such as observing, evaluating, and criticizing their own learning (Angelo & Cross, 1993).

Learning log assignments can be the basis for class discussion and further analysis of assigned topics in class, and can be a valuable tool for making connections to previous individual learning experiences. The learning log can provide a valuable resource for the faculty member and student to jointly assess the student's learning.

A learning log can be examined every week or every other week. The teacher may periodically requests the student e-mail the learning log document as an attachment, providing a snapshot of the student's progress and comprehension of the topic. Without having to read the entire log the teacher can quickly gauge just how well the student is doing with the assignment. A single entry of work in a learning log after several weeks of the assignment indicates a last minute effort on the part of the student and immediately alerts the teacher that the student needs personal attention. A log with many entries from a variety of sources indicates the student is progressing nicely with the assignment.

3. THE LEARNING LOG ASSIGNMENT PROCESS

The following is an outline of the steps taken in implementing the learning log assignment:

1. The teacher prepares and delivers a brief lecture on the concept and advantages of a learning log assignment.
2. A sample learning log is placed on the network and a hard copy is given to each student during the lecture.
3. A list of topics is created and placed on the network for the students to look over before the next class. (Figure 2 shows a list of the topics for the information systems security course.)
4. Students sign up for topics on a first come first serve basis. A web site containing the topics can be used for this purpose. If no web site is available, a simple sign-up sheet can be used.
5. Students are asked to maintain the learning log using a designated word processing software program.
6. As the student nears the end of the learning log project, the student is asked to create approximately ten Frequently Asked Questions (FAQs) from the learning they have experienced. The FAQs are placed at the bottom of the learning log document.
7. The student will periodically e-mail the partially completed learning log to the teacher for review and comments.
8. At the end of the learning log project the student will prepare a PowerPoint presentation of the topic and present it to the class. The student "expert" is expected to give the presentation and answer any questions posed by the instructor or other students.
9. Each student is given an evaluation sheet to evaluate each presentation. These sheets are collected and reviewed by the teacher.
10. The final learning log file and PowerPoint file are sent to the teacher as e-mail attachments. The learning log and PowerPoint slides are then placed on the network so all the students have access to them.
11. Each student is given a learning log evaluation sheet and asked to read each learning log and evaluate it.
12. The teacher reads the learning logs and evaluation sheets and assigns a grade to both the learning log and PowerPoint presentation.
13. In this specific course, the teacher has taken the learning logs and used them as a resource to build a web site for the class.

4. CONCLUSIONS

Since a learning log assignment requires a substantial amount of time and a considerable commitment to self-improvement and achievement on the part of the student, learning logs are best used in upper level courses in the student's major. The information systems security class fits this description nicely since it is usually offered as an upper level class in the information systems major. Many students will have had little or no previous experience with this type of structured self-assessment. Therefore, it is best to teach students the learning log assignment by providing examples, coaching, and regular reviews of their progress.

4. REFERENCES

Angelo, T. A. and K. Patricia Cross [1993], Classroom Assessment Techniques, 2ed. Jossey-Bass Publishers, San Francisco, CA.

McGinnis, D. R., The Individual Topic Expert, http://www.jise.appstate.edu/TeachingTipExample.htm

5. RECOMMENDED WEB REFERENCES

http://aw.colostate.edu/reference/wac-faq/pop5h.htm

http://www.froggy.com.au/literati/Sample/F1A01q.htm

http://www.qub.ac.uk/mgt/itsoc/proj/learnlog.html

http://www.learndirect.co.uk/personal/helpandadvice/llhome/llsetout/

AUTHOR BIOGRAPHY

J. Howard Baker is Assistant Professor of Computer Information Systems at the University of Louisiana at Monroe. He holds a B.S. in Management from Samford University (Birmingham, AL), a Master of Accounting (MAcc) from the University of Southern California, and a Ph.D. in Information Systems from the University of Texas at Arlington. Before entering his teaching career he worked for a Fortune 100 company as a project leader, two large financial institutions as head of information systems auditing, and as an information systems consultant in Europe and Australia. His areas of research include knowledge management, information systems audit and security, learning organizations, and leadership. He is a regular contributor to *weLEAD* electronic magazine (www.leadingtoday.org) and is the Editor of the *E-Journal of Learning Organizations and Leadership* (http://www.weleadinlearning.org/).

Figure 1 – Sample student learning log (partial)

LEARNING LOG
Hostile Active X and Java Applets

Sunday, July 28, 2002
www.webopedia.com

Very helpful tech-dictionary provides basic definitions with related terms and articles. Contains helpful hyper-linked text.

Monday, July 30, 2002.
http://www.cs.princeton.edu/sip/faq/java-vs-activex.html
(Found via www.google.com)

This site compares security issues of Active X and Java by answering a series of common questions. The article is brief but contains good information. Some statements are misleading due to a publishing date of 1997 and changes that have occurred since.

Monday, July 30, 2002
www.microsoft.com

This is a highly informative site containing vast amounts of information about Active X Controls, their use and importance. However, this site lacks information I expected concerning the security aspects of Active X applications.

Monday, July 30, 2002.
http://www.securingjava.com/chapter-two/

This is an actual book published on the net called Securing Java. It has large amount of reading material, with in-depth coverage of all aspects of Java security. Each chapter contains helpful charts and pertinent information on a specific topic. I found the reading requires intermediate knowledge and understanding of computer operations.

Figure 2 – Sample list of information systems security topics

Anti-Spam organizations	Laptop physical and data security
Anti-virus Software	Mainframe Security
Authentication	Microcomputer physical security
Backup and Recovery	Microsoft's Trustworthy Computing initiative
Business Continuity Planning (BCP)	National Infrastructure Protection Center (NIPC)
Certification of web sites	Netiquette
CISSP exam and (ISC)2	Network Intrusion Detection Systems
Computer ethics	Office XP security
Computer Fraud and Abuse Act	PKI and digital certificates
Cyber Crime	Remote Access Authentication
Cyber Terrorism	Risk Management
Data center physical security	Routers, hubs, and switch vulnerabilities
Denial-of-Service attacks	Security policy development/management software
E-Commerce Security	Software Piracy
E-Mail Security	Spam, blacklists, probes, and filters
Encryption	Spam laws
Firewall	Spyware
Home Computer Security	TCP/IP Security
Hostile Active X and Java Applets	Trojan Horse
Identity Theft	Virtual Private Network Security
Incident response	Viruses
Industrial Espionage	Windows 2000 Security
Information ownership and classification	Wireless LAN Security
Internet penetration testing	Worms
Internet Privacy	

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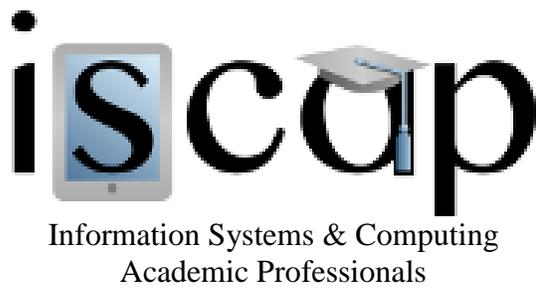
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