Lecture 8: Post Implementation Review & IT Audit

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The new IT manager of SKY & Co. is skeptical about the effectiveness of the company’s internal IT controls. He has identified that proper policies and procedures have not been documented. One of his foremost objectives is to restrict the use of illegal software and he has asked you to investigate and control such violations.

**Required:**

(a) What audit procedures would you follow to identify software licensing violations? **(3 Marks)**

(b) Suggest appropriate steps to prevent such violations. **(4 Marks)**
Exam Question – Summer 2007

Examiner’s Comments

“This question was aimed at testing the understanding of students regarding software licensing issues. Part (a) of the question relating to how violations (if any) should be identified was not well attempted although the answer was rather straightforward. Majority of them discussed the controls over procuring genuine software and repercussions of using unlicensed software etc. which was not required.

However in part (b), most of them were successful in suggesting appropriate steps to prevent software licensing violations such as not allowing the users to install software, centralized software installation, non-usage of removable media by end-users, control on downloading software from the Internet etc.”
Evaluating efficiency of computer systems may be needed to identify whether a system upgrade is required or just re-configuration would be sufficient or it is more of a personnel problem rather than system issue. In order to find out answers to these questions, a planned and systematic approach is needed.

**Required:**

List the steps required to carry out an effective system evaluation.

(6 Marks)
Examiner’s Comments

“ Majority of the candidates obtained poor marks. The question required the candidates to list the steps to be followed in evaluating system efficiency, such as objective formulation, performance criteria identification etc. However, most of the candidates explained the tests conducted and areas reviewed during the fieldwork phase such as system testing and reporting capability, which were not performed.”
Accelerated Technologies International (ATI), specializes in compiler constructions and embedded systems and has offices in Pakistan and Silicon Valley. Its work focus is development and research. ATI have no product of their own but do research for others. In progress are two development projects and a research study in embedded systems field. You are a manager in a firm of external auditors that has just taken over the audit of ATI and have expertise in evaluating the reliability of controls over information systems function.

**Required:**

You are assigned to evaluate the quality of information systems functions. How would you evaluate the top management and check their performance in the functions they perform?

(10 Marks)
Energetic Incorporation started out as a small manufacturing firm producing solar energy equipment. With the impending shortage of energy in some countries and greater environmental concerns, demand for its production has grown. The company has trebled in size over a period of five years. A computer system has been designed to facilitate reordering and control over inventory due to some problems faced earlier. As an internal auditor, you are asked to evaluate the system and give useful insights.

**Required:**
(a) What sort of normative model would you prefer against which you can compare the systems development practices being followed? Explain your model and give reasons for its choice.  
(5 Marks)

(b) What do you suggest would be the preferred type of audit approach for such systems? What strategies would you apply to evaluate such systems?  
(5 Marks)
Testing business applications is a very important part of IS auditing. There are two basic approaches to business application testing namely Black Box Testing and White Box Testing.

(a) Define and differentiate between Black Box and White Box testing approaches.   (4 Marks)

(b) List down and describe at least four common types of tests of controls used in white box approach.   (8 Marks)
Examiner’s Comments

“This was the most poorly attempted question. In part (a) students could not distinguish between Black Box, testing which is conducted by reconciling input transactions processed by an application with output results, and White Box testing, i.e. testing an application’s internal logic directly. For the second part, it was surprising to note that final level students were unable to identify and explain tests of controls which include tests for authenticity, accuracy, completeness, redundancy, access, audit trail, and rounding errors. Of course, these tests related to computerized applications and controls. Students would do well to study up on this important area which is of great importance for an IT auditor.”
Computer Assisted Audit Techniques
Computer Assisted Audit Techniques (CAAT’s) are important tools for the IS auditor in gathering information from these environments. When systems have different hardware and software environments, different data structure, record formats, processing functions, etc., it is almost impossible for the auditors to collect evidence without a software tool to collect and analyze the records. CAAT’s include various tools and techniques, one of which is Generalized Audit Software (GAS).

**Required:**

(a) Which issues/areas an IS auditor should consider while selecting a CAAT to perform an audit procedure? (4 Marks)

(b) Explain the functions which the GAS can perform. (4 Marks)
Exam Question – Summer 2007

Examiner's Comments

“Part (a) of this question was not adequately attempted by most of the students. Very few were able to identify the elements to be considered while selecting a CAAT. Further, a large number of candidates misunderstood this part and narrated the steps to be taken for procurement of CAAT. The issues/areas which the students were expected to mention in their answers include, ease of use, extent of flexibility, training requirements, installation requirements etc.

The 2nd part of the question regarding usage of generalized audit software (GAS) was a simple one and was well attempted. The functions performed by GAS such as file access, file organization, data selection and arithmetical, statistical & reporting functions etc. are generally known to almost all well informed computer users.”
You are audit manager of a medium-sized audit firm associated with an international firm of accountants. Last year, your firm was subject to a review for quality control of audit work by certain representatives of this international firm. Although the overall rating of the audit quality was satisfactory, the review was concluded with a remark of excessive time consumed. The prime cause behind such time wastage was diagnosed to be over reliance on manual work. Accordingly, it was suggested that computer assisted audit techniques (CAATs) should be used in order to increase the effectiveness and efficiency of audit work. Besides other forms of CAATs, it was proposed that generalized audit software may be put into use to achieve the said objectives. Partner in-charge of audit and related services has asked you to submit a report on the common functions that generalized audit software performs and the pros and cons of using such software. Accordingly, you are required to list:

(a) The common functions performed by generalized audit software. (4 Marks)
(b) The advantages of using generalized audit software. (3 Marks)
(c) The limitations of using such software. (3 Marks)
Examiner’s Comments

“This question was focused on 'Generalized Audit Software' (GAS). Many examinees confused this with computer assisted audit techniques (CAATs) and described CAATs which was not required. Examinees should note that GAS is one of the tools used in CAATs and the question was focused on GAS not on CAATs.

Common functions of GAS include testing integrity of data files, testing the functions of data editing and validation controls, checking accuracy of calculations by the system, selecting a statistical sample, selecting transactions meeting specific criteria etc. Many of the examinees expressed cost effectiveness as one of the advantages of using GAS, however GAS, are usually very costly. In fact licensing cost is one of the factors prohibiting their extensive usage.”
The Manager in-charge of the audit of a large manufacturing company has analysed that the IT systems being used by the company are a bit complex and the accounting system is largely dependent on the reports generated by the IT systems. Accordingly, you, having the expertise of Information Systems (IS) audit, have been requested to assist in carrying out the audit relating to IT systems of the company. The audit manager has particularly sought your help with regard to application of CAATs.

**Required:**

(a) Briefly describe CAATs and identify the avenues where these can generally be used.  
(3 Marks)

(b) List down the decision factors which are considered by an auditor while deciding whether he should apply CAATs.  
(3 Marks)

(c) Identify and describe very briefly, four basic types of CAATs that can be applied in the given circumstances.  
(4 Marks)
Examiner’s Comments

“(a) Candidates had described the CAATs as computer assisted techniques but most of them were unable to identify the avenues where these can generally be used. CAATs may be used in performing various audit procedures including:

- Test of details of transactions and balances
- Analytical review procedures
- Compliance tests of controls
- Penetration Testing

(b) A number of candidates were unable to write the factors to be considered while using CAATs. Some of the factors which the auditor should consider are: auditor’s computer knowledge and expertise; efficiency and effectiveness of using CAATs over manual techniques; time constraints, level and type of audit risk and cost benefit analysis etc.

(c) Candidate mostly mentioned test data and generalized audit software only. Very few could mention other types of CAATs such as Utility Software, Specialized Audit Software, Audit Expert Systems etc.”
Lecture Supplements

- IT Audit Checklist - Khurram Uqaili
- Computer Assisted Audit Techniques
- I FAC Guideline 6 - IT Monitoring