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The Role of User Support Services in Modern Auditing

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Abstract

Do the existing ways of providing user support apply to auditors or is there something that is unique or different with the auditors' need for user support? The auditing context has some special characteristics that may be analyzed to answer this question. The purpose of this paper is to present a theoretical model that illustrates how computerized decision aids affect user support services in modern auditing. Little is known about the auditors' perceived need for user support and the support services made available to them by the audit firms. Some previous studies on the use of software applications in auditing have suggested that the use will increase in the future, however, there has not been any evidence of that happening. Maybe this is an indication that the lack of efficient user support is hindering the spread of the use of decision aids in audit firms.

Introduction

There have been numerous studies concerning the effects of decision aids on decision making. Some indicate that decision aids may enhance decision making while others report that they may lead to poor quality decisions (Kottemann et al., 1994 and Todd & Benbasat, 1992). Maybe these contradictory results are an indication that users have false expectations on the decision aids or they simply use the aids incorrectly. Thus it is possible that proper user support affects the usability of decision aids, subsequently leading to improved decision making and fewer audit errors.

User support services and technology acceptance are widely researched areas in management information systems research. However, it has been very common to use students (e.g., Taylor & Todd, 1995), administrative and clerical staff as subjects. There have been studies using managers (Igbaria, Parasuraman & Baroudi, 1996) and professionals (Gogan, 1991) as subjects. Gogan studied auditors' use of computers. Her results suggest a strong relationship between the availability of tools and usage.

Do the existing ways of providing user support apply to auditors or is there something that is unique or different with the auditors' need for user support? The auditing context has some special characteristics that may be analyzed to answer this question. Traditionally an audit has been a team effort in which the younger members learn from the older members. However, the roles are reversed to some extent in the context of information technology use. The younger auditors are more at ease with using new information technology. Another characteristic is the possibility of liability and damages if the auditors make errors. The purpose of this paper is to present a theoretical model that illustrates how computerized decision aids affect user support services in modern auditing.

Theoretical Model on User Support Services in Auditing Components from Information Systems Research

User Training

Auditors do need training to use the more advanced software applications. The training ought to be such that it enables the auditors to learn more on their own, after training. In a recent study by Santhanam and Sein (1994) the users that received appropriate training were able to improve their performance with the help of mental models. Therefore it can be said that effective training programs combine hands-on training with theory that helps users to develop good mental models of the systems. The trainers could also assess the delayed effects of training. They could ask for feedback on the training to find out whether training was effective and if it helped the users in their work. This leads to the first proposition:

P1: Effective use of the decision aids requires that auditors are trained to use them.

Other User Support Services

User support can be given to the end users in several ways. Peers can give user support to each other using electronic networks. Software can have on-line help or user dialogs. There can also be a help-desk facility available. User support can also be combined with user training. But there can also be limitations to user support due to financial and technological constraints (Trauth & Cole, 1992). The acquisition of new information technology should be based on a thorough, business-focused analysis of the users' needs. If end users get good user support services then they should be more productive. However, the support services should be planned to accommodate each user's specific needs (DeSanctis & Jackson, 1994). This leads to the second proposition:

P2: User support services should be built around auditors' individual needs.

Components from Accounting and Auditing Research *General Knowledge of Accounting Information Systems (AIS)*

During a formal university education students studying to become auditors get a basic training in accounting and AIS. However, after a few years their knowledge on AIS has become quite out of date. The auditors are secondary users of AIS, that is, they evaluate and use the information produced by the system but they do not actually use the systems. This means that they need information about the new technological innovations in AIS, for example, electronic commerce and electronic data interchange. These arguments form the basis of the third proposition:

P3: Developments in AIS lead to the auditors needing support services in order to do an audit.

The Audit Process

The audit process can be divided into four phases: (1) planning and designing an audit approach, (2) testing controls and transactions, (3) performing analytical procedures and testing details of balances, and (4) completing the audit and issuing an audit report. During this process they need to be able to choose the tools for audit tasks. According to McMillan and White (1993), auditors seem to initially select audit procedures that are the easiest or the least time-consuming to perform. Biddle et al. (1990) studied the possibilities computer-intensive methods (CIM) have in audit sampling. Their findings indicate that for large samples CIM has a higher sampling efficiency than the traditional sampling methods used in auditing. Higher sampling efficiency can lead to better confidence in the sampling results.

There are no real general-purpose software applications in auditing. At times the term generalized audit software has surfaced (e.g., Lovata, 1988) in the literature. However, the application in question cannot be found as such in the audit firms. In reality the auditors use several quite different software applications. Some of these applications are simple word-processors, spreadsheets and spreadsheet models others are more advanced systems, like decision support systems and expert systems. Auditors need information both on the tools available and how to use the tools. Most of the decision support systems and expert systems are very task specific. Therefore it can be said that:

P4: To choose a decision aid that matches the audit task auditors need user support services.

Audit Experience

When new auditors are hired they start as assistants because they do not have the required audit expertise. They should, however, have general problem-solving abilities since these abilities aid in acquiring the

procedural knowledge needed in auditing (Bonner & Walker, 1994). If audit tasks are highly complex then it is possible to improve performance by decision aids, other similar devices or some changes to training programs (Bonner, 1994). Galletta et al. (1993) studied how users find errors in spreadsheet models. They found that the subjects detected only 56% of the errors. They also found that the subjects possessing both accounting and spreadsheet expertise performed best. This would indicate that the IS training ought to be combined with other work-related training. Auditors' level of experience affects also the tasks they are expected to perform. This leads to the fifth proposition:

P5: Auditors' experience affects the need for support and the type of support needed.

Components from Behavioral Research

The Effects of Decision Aids on Decision Making

Auditors are faced with ever increasing amounts of information when forming an audit opinion. In a recent study Stocks and Harrell (1995) investigated how increasing level of information effects the quality of judgments reached by individuals and groups. Their results imply that groups can better handle vast amounts of information. Perhaps individuals should be provided with only those information items that have the greatest predictive ability for a particular judgment. Auditors can never investigate all the facts that could affect the accounts because the audit would cost more than any client is prepared to pay. Therefore the auditors make judgments based on partial investigation.

Todd and Benbasat (1992) studied the use of information in decision making and the impact of computer-based decision aids. Their results indicate that decision-makers processed less information themselves and relied on the decision aid to reduce their information-processing burden. Whitecotton (1996) researched how a decision aid facilitates professional judgment. She found a strong negative correlation between confidence and decision aid reliance. It seems that the more confident individuals are in their own abilities the less they rely on decision aids. This would indicate that good training with the decision aids could improve decision aid reliance and thus improve decision making.

Kottemann et al. (1994) studied how decision aids inflate the user's confidence beliefs. Their results indicate that effort and information are responsible for the inflated confidence beliefs of what-if analysis. They also offer an alternative interpretation that people believe that computerized what-if analysis is beneficial because they have a predisposition to believe that computer-based tools are helpful. This leads to the sixth proposition:

P6: Lack of user support services can lead to non-reliance on decision aids.

Conclusions

This theoretical model offers a rather broad view to the user support in modern auditing. It does not address the issue of how to provide user support it only answers the questions why support is needed and on what areas it is needed. Traditionally auditors have not taken many information systems courses during their basic education. So how can they audit the new virtual business ventures or audit companies doing electronic commerce? The answer is efficient user support services. Auditors' need for user support will increase a great deal when the traditional auditing dies out and is replaced with computer-assisted auditing which is the only way of auditing in a paperless accounting information systems.

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