

# Research on the Cultivation of “Managerial” Accounting Talents’ IT Quality

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## ABSTRACT

The rapid development of information technology puts forward higher request on the accounting personnel’s IT quality. This paper begins with the analysis about the information technologies which impact on accounting personnel in order to discuss what IT quality should be possessed by accounting personnel. Then according to the target of “managerial” accounting talents cultivation mode, it proposes several suggestions for the university about how to cultivate the “managerial” accounting talents’ IT quality.

**Keywords:** Information Technology (IT); “Managerial” Accounting Talents; IT Quality; Cultivation

## 1. Introduction

With the arrival of information age, the working environment of accounting personnel has taken place great changes. The tools used by accounting personnel in the past were paper books, abacus and so on, now are replaced by electronic accounts and computer. Because of the information technology (called IT), the accounting information system has become the important part of the enterprise information system. Rapidly changing information technologies are affecting accounting personnel incessantly.

What are the information technologies which influence the accounting personnel including? To deal with accounting work by using information technologies, the accounting personnel should possess what information technology quality? Such questions must be answered immediately.

There are a great many studies concerning information technology. However, there is hardly any paper about the information technology relating with accountancy, as well as IT quality relating with accounting personnel. This paper firstly connects information technology with accountants and accountancy. It starts with the analysis about the information technology which affecting the accounting personnel. Then, according to Paul Zurkowski (1974), American Library Association Conference (1989) and Christina Doyle (1992), it firstly puts forward the definition of “IT quality of accounting personnel” considering the specific characteristic of accountancy.

Finally, in accordance with the university’s “managerial” accounting talents cultivation mode target, it proposes several suggestions about how to cultivate the IT quality of “managerial” accounting talents.

## 2. The Information Technologies Which Affecting the Accounting Personnel

What are the information technologies affecting the accounting personnel? The AICPA’s top technology initiatives list for 2010 highlights the technology initiatives that CPAs and IT professionals working closely with. CPAs consider which information technology most likely to affect the business marketplace and the field of financial or data management over the next 12 to 18 months. 2010 AICPA Top Technology Initiatives Survey Results is showed in **Table 1**. In China, Shanghai National Accounting Institute initiated the first investigation about “The Top Ten Information Technologies Affecting Accounting Personnel” in 2002. The result of Chinese investigation is showed in **Table 2**.

Compared the two tables, we can find that “security of data, code & communications/data security & document retention/security threats” is the top one technology which affecting CPAs of USA in the next 12 to 18 months of 2010. Moreover “accounting and financial management software” is the top one technology which affecting Chinese accounting personnel, while “data/information security and control” and “network and computer security” are the third and fifth one.

**Tables 1** and **2** show that rapid development of IT does a far-reaching affection on accounting personnel.

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**Table 1. Top ten information technologies influence American CPAs.**

Number	Technology
1	Security of data, code & communications/data security & document retention/security threats
2	Connectivity/wireless access/high speed Internet connections/voice and data
3	Backup solutions/disaster recovery/business continuity
4	Secure electronic collaboration with clients – client portals
5	Paperless workflow/paperless technology/electronic work papers
6	Laptop security/encryption
7	Small business software/Office 2010/Windows 7
8	User mobility/mobile computing/mobile devices
9	Tax software/electronic transmittals of tax forms/modern e-file
10	Server virtualization and consolidation

Data Source: <http://www.aicpa.org>.

**Table 2. Top ten information technologies influence Chinese accountants.**

Number	Technology
1	Accounting and financial management software
2	Enterprise resource planning (ERP)
3	Data/information security and control
4	Database technology
5	Network and computer security
6	Computer assisted audit technology
7	Computer virus and prevention
8	Data backup and recovery
9	Enterprise network technology
10	Tabulation technology and electronic form

Data Source: D. W. Xia, "The Top Ten Information Technologies Affecting Accounting Personnel", *Journal of China Computerized Accounting*, Vol. 6, 2003, p. 9.<sup>[1]</sup>

It puts forward higher request on accountants. Only to have the corresponding IT quality, the accountants can cater to the demands of the information age.

### 3. IT Quality of Accounting Personnel

#### 3.1. The Definition of IT Quality<sup>[2]</sup>

The concept of IT quality was firstly brought out by Paul Zurkowski who was the chairman of American Information Industry Association in 1974 on the committee of nationwide library and information science. IT quality is generalized as technology and skills using a lot of information tools and main source to make problems get answers.

In 1989, the American Library Association Conference defined IT quality into four IT skills, namely to identify, to evaluate, to locate, and to use IT.

In 1992, through a survey, American scholars Christina Doyle further defined IT quality as the ability to obtain, evaluate and use the information from different sources.

Thus, IT quality is a man's quality to identify, create and utilize information. It is also a man's capacity to get, evaluate and effectively use information resource. IT quality covers three aspects:

1) *Information consciousness*: It is self-consciousness for information demand, namely it is ability of people to feel, understand and evaluate the nature and social phenomena, behavior and theory from information aspect in order to capture and judge useful information.

2) *Information morality*: It is the behavior standard sum to adjust the relationship between information processors, information senders and information users, and refers to the morality of entire information activities.

3) *Information competence*: It includes the information obtaining capacity, information processing ability, new information creating ability, information using ability, etc.

#### 3.2. The IT Quality of Accounting Personnel

There is no specific provision about what IT quality the accounting personnel actually should have. In Chinese Certified Public Accountants Competence Guidelines, it is said that IT has changed the way which the CPAs play apart in. CPAs should not only have the skills of using information systems and applied information technology control, also should play an important role in evaluating, designing and managing the information system with team together.

Information technology knowledge shall at least covers the following disciplines: basic knowledge of information technology; related knowledge of information technology internal control; related knowledge of applied information technology; knowledge of evaluating, designing and managing information system.

The content of information technology knowledge shall at least include as follows: Organizations and accounting information system; relevant knowledge of personal system application control; the application of information system in organizations and accounting, especially the practical problems and development about the financial accounting and reporting information technology system; the framework of evaluation of control and risk assessment about financial accounting and reporting information technology system.<sup>[3]</sup>

According to Chinese Certified Public Accountants Competence Guidelines, it considers that the IT quality which accounting personnel should have may as follows:

1) *Strong information consciousness*

The world information revolution is not only changing the human beings' means of cognition of the world, but also making the interconnected way between people be-

come unprecedented active. Media such as internet, TV, broadcast and so on provides a lot of external information for the accounting personnel. Accounting information system provides a lot of internal financial information for the accounting personnel. Accounting personnel should identify the usefulness of information clearly in daily access to information; have enough professional sensitivity to the available information and capture the accounting useful information consciously.

#### 2) *Mastering information tools expertly*

Information tools should include information acquisition tools, information processing tools and information output tools. The internet is the main tool from which accounting personnel obtain external information, so accounting personnel should be able to browse internet skillfully. However, most information accounting personnel handling with is from the enterprise information system. Consequently, operating ERP software skillfully is the basic quality of accounting personnel. Then accounting personnel should be able to analyze the accounting information using financial analysis software or Excel tools. At last, financial statements and financial analysis report can be conveyed through a certain tool such as XBRL technology, network accounting information system, office automation system and email by accounting personnel.

#### 3) *Processing information scientifically, using information creatively*

Accounting personnel should screen, classify and integrate information matter-of-factly. The action of fraud, data fabricating and data manipulating should be avoided. Through the data mining, some useful information can be fully found behind the large quantities of data. Using information creatively is the ultimate purpose of the accounting personnel.

#### 4) *Good information ethics*

In operating accounting information system, accounting personnel should strictly abide by the internal control regulations of accounting information system. Although network accounting information system is always facing danger from the internet, but insiders' moral risk is still the biggest risk of accounting information system security. Tampering, leaking and undermining accounting data illegally by the accounting personnel who familiar with accounting information system may be more terrible than hackers or virus. Therefore, accounting personnel should have good information ethics in using accounting information system.

## 4. The Cultivation of “Managerial” Accounting Talents’ IT Quality

### 4.1. The Definition of “Managerial” Accounting Talents

“Managerial” accounting talents are compound account-

ing professionals who master accounting theory and method, modern enterprise management knowledge and international practice systematically, have a strategic thinking and vision, have potential to become financial experts of the enterprise management team in future.

Compared with the traditional accounting talents cultivation mode, the cultivation mode of “managerial” accounting talents mainly highlights the inter-disciplinary talents’ knowledge structure which combines the accounting and management. The knowledge structure includes professional knowledge which forms the professional concept and professional ability; management knowledge which decides the advanced management idea, management knowledge and management ability, creates high economic efficiency and high economic benefits; economic knowledge which promotes the judgment of macroeconomic situation; finance knowledge which can be helpful to win more financial market resources for the development of enterprises; social and communication knowledge which sweeps the obstacle of development and expands the enterprise boundaries; foreign languages knowledge which adapts to the internationalization; humane knowledge which cultivates the charm of managerial accounting personnel.

### 4.2. Suggestions about the Cultivation of “Managerial” Accounting Talents’ IT Quality

#### 1) *Course information online, course content open, strengthening students’ consciousness and ability of information acquisition*

Compared with common accountants, “managerial” accounting talents should have a stronger information acquisition consciousness and ability. It is the only way can help accounting talents always stand in front of the management to provide advanced management concept for the enterprises.

The popularization of internet and computer provides basic material conditions for the network teaching. All of the course material including teaching syllabus, teaching courseware, teaching video etc. should be online. Students can download these information according to oneself circumstance.

Establishing an independent learning system (such as ACOD VOD system), in which students can do automatic learning and self inspection outside the classroom, communicate with teachers for questions.

In the teaching process, we should pay attention to the teaching contents openness. Current renewal of teaching content always unable to keep up with the footsteps of knowledge and information quickly updating, therefore we must guide students to collect related extracurricular knowledge as a supplement, and encourage the students participate the discussions in class actively. Students may enhance their capability of obtaining information through

collecting information, conveying information, discussing information and summarizing information.

2) *Using accounting teaching software to improve the students' information analysis and decision making skills*

If "managerial" accounting talents want to be senior manager, they must provide strategic financial decisions for the enterprises, while these financial decisions come from the judgment about the financial information, macro economic information and so on.

Besides Use-Friend ERP-U8, Kingdee K/3, currently there are other related multimedia teaching software available to be used in college's accounting teaching, such as basic accounting multimedia teaching system, cash flow statement multimedia teaching system, cost accounting multimedia teaching system, consolidated financial statement multimedia teaching system, financial management and financial analysis multimedia teaching system, audit the multimedia teaching system, tax accounting and tax planning multimedia teaching system, etc.

Relying on the modern accounting and management software, making financial decisions quickly is the basic quality of "managerial" accounting talents. Therefore, it shall be fully using accounting teaching software in the accounting teaching process. Not only enabling students to manipulate relevant accounting software, but also to cultivate their management decision-making consciousness. Through the process of importing accounting information, choosing analysis tools and making a financial decision, we should guide students to think as a manager.

3) *Imparting information security control technology; improving students' information moral level*

In addition to obtaining information keenly, process information scientifically and making decisions quickly, guaranteeing the information securely and confidentially is also a basic IT quality of management accounting talents.

Along with the development of computer system from the close to the open, the accounting software which is used by accounting personnel is also developing from LAN to the internet.

According to **Table 2**, data/information security and control, network and computer security, computer virus and prevention, data backup and recovery are placed in the third, fifth, seventh and eighth sites. These techniques are part of the information system security control technology. Their importance and influence is obvious.

So far, the key technologies of information security control are mainly including firewall technology, information encryption, vulnerability scanning technique, intrusion detection technology, virus detection and eliminate tech-

nology, biological technology (such as fingerprint identification), etc. So we have to impart students the basic control technology.

In addition, students are required to develop good habits of data backup. Back upping the accounting data regularly is also very important. Once the system is destroyed, data backup can be used to recover the accounting data.

Meanwhile, information security technology is a discipline with continuous development; the students must continuously update and follow up the latest information security control technology.

Information morality is the professional ethics requirement which proposed for the accounting personnel by information era. Firstly, let students understand the internal control system of accounting information system comprehensively, including the operating system control, database control, system development control, system maintenance control, application control, computer center control, organization control and workstation control etc. The requirements of each internal control should be introduced emphatically. Then, on this basis, let the students know whatever accounting station he/she in, should he/she keep the due moral level in the process of obtaining, using and transferring the accounting information.

## 5. Conclusion

Information age puts forward new requirements to the quality of accountants. This paper makes a theoretical discussion on the accounting personnel' IT quality. Our study contributes to the literature to present the concept of "IT quality of accounting personnel" and offer several recommendations for the university about the cultivation of "managerial" accounting talents.

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