

# The Fear of ICT among Commerce Teachers - How to Overcome Teachers' Resistance

SHIPRA VAIDYA\*

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## Abstract

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*Computer technology and its usage have registered a significant development during the last three decades. Historically, computers have been used effectively in science and technology to solve the complex conceptual and logical problems. They have also been used for carrying out economic planning and forecasting processes. Recently, modern day computers have made their presence felt in business and industry. An important impact of computers has been on data storage and data processing within the organisation. The advent of computers has also fast replaced the traditional methods of accounting by dispensing with the manually handled book of accounts and associated paper work. The development of database technology has brought about a revolution in the accounting department of a small to large sized organisations. This revolution has opened new vistas of growth in the practice of accounting profession. And there is no stopping to this avalanche of change. Our commerce teachers cannot keep themselves away from these changes and happenings. But, the electronic frontier is not something that commerce education has embraced with open arms. The fear of ICT among post graduate teachers of commerce is responsible for the slow acceptance of modern technology in the educational environment. This paper explores the trepidations of post graduate teachers of commerce in the implementation of ICT and submits suggestions to integrate technology in the classrooms. The study is confined to the commerce post graduate teachers of Kendriya Vidyalaya Sangathan, but the findings may be relevant to the entire commerce teaching community.*

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\* Associate Professor, Department of Secondary Education, NCERT, New Delhi.

### **Introduction**

The world of business is witnessing developments and changes coming too fast and thereby demanding our attention for commerce curriculum at the higher secondary stage. These would not wait for the normal five-year curricular cycle in order to be included in the school curriculum. Every learner in a dynamic learning society has to be familiarised with such areas of knowledge in the global setting. The past three decades have witnessed rapid advances in information technology that in turn has affected the business activities to a great extent. The role of computers has also brought a big revolution in accounting theory and practices. The accounting principles, practices, procedures and techniques have to be tuned with the economic and social development of a country so that the primary objective of accounting, that is the decision worthy reporting, is achieved.

How can we make teaching and learning of accounting curriculum effective at the school level? The National Curriculum Framework-2005 (NCERT) has proposed the epistemic shift that the textbook should not be perceived as a closed box and the only source of information. It should be one of the ways of understanding issues and be seen as a dynamic document. Therefore, for upgrading the accounting curriculum at the higher secondary stage, commerce educators have expressed significant interest and are pursuing the integration of ICT into the accounting curriculum. ICT in the school system has resulted to look beyond the traditional teaching-learning processes. The use of computers

is now to be seen in a broader context than merely seen as a separate subject of study. It should become an integral part of literacy, computer aided learning and finally computer based learning throughout the country.

Simultaneously, the urge within the accounting profession has shown a shift for acquiring the skills needed by students after entering the workforce. It has been largely felt that an opportunity need be given to the learner to dwell into the changing role of accounting and understand the shift from just *reading numbers to reading beyond the numbers*. The arrival of computers has fast replaced the traditional methods of accounting by dispensing with manually handled book of accounts and associated paper work. The development of database technology with Database Management System (DBMS) has brought out a revolution in accounting of small to large sized organisations. This revolution has opened new vistas of growth in the practice of accounting profession. Usage of computers and IT enables a business for quickly, accurately and timely access the information that helps in decision making. This sharpens the competitive edge and enhances profitability.

Computerised Accounting System refers to the processing of accounting transactions through the use of hardware and software to produce accounting reports. Against this background, as a follow up of National Curriculum Framework-2005, a new course (optional) on 'Computerised Accounting System' is designed by NCERT for the higher secondary commerce education programme.

### **About the Course**

The newly brought out course on 'Computerised Accounting System' develops a basic understanding about the nature and purpose of accounting information and its use in the conduct of business operations. The course is optional to the existing course on 'Analysis of Financial Statements' at the Class XII level and carries the total weightage of 40 marks, divided as 20 marks theory and 20 marks practical. The course lays emphasis on the process of accounting data as a part of Accounting Information System (AIS) using the two application softwares Excel and Access. Using these softwares, the learners of accounting are exposed to design need based small accounting projects and are facilitated towards the concept of data flow, information generating and data representation through charts and graphs. The exemplar projects given in the textbook relates to Bank reconciliation statement, Petty cash book, Purchase and sales book, Ratio analysis, Pay roll, Asset accounting, etc. The course on Computerised Accounting System is a skill-based course and prepare students for the world of work. With the business operations moving towards automation, the component of ICT in the teaching-learning of accounting is gaining importance. The course has employment potential too.

But unfortunately, in its sixth year of implementation, the course is quite unpopular among commerce teachers and is yet to take off. The very apparent reason for this dismal situation is the 'fear of ICT' among commerce teachers

*who think mouse is something they do not want to find in their kitchen* (Mayya, 2007). Though, the pressure for schools to reform and change the method in which teachers instruct is over-emphasised, but until teachers become comfortable and confident in using the computer, it remains an isolated tool with either the potential to increase student learning or the amount of dust it accumulates (Deborah, 2000). When teachers do not use computers, the likelihood of students using it and becoming computer literate is greatly affected. Providing computers in schools is not adequate. What is required is to motivate teachers to recognise the potential of ICT to enable school education.

### **Reporting the Survey**

Realising the resistance of commerce teachers towards the newly designed course on Computerised Accounting System, a survey was conducted on the post graduate teachers of commerce of Kendriya Vidyalaya Sangathan to ascertain the actual and perceived difficulties in using ICT in the commerce classroom. The study was conducted in two phases:

Phase I: Conduct of survey on the teaching of a newly designed course on Computerised Accounting System.

Phase II: Organising series of teacher education programmes on 'Computerised Accounting System' as a mode to overcome teacher's resistance.

### **Phase I: Conduct of Survey**

Kendriya Vidyalaya Sangathan (KVS), New Delhi was approached to depute post graduate teachers of commerce to participate in this academic exercise in

January 2009. As many as eighty-five (N=85) deputations were received covering all the regions of Kendriya Vidyalaya Sangathan. The female commerce teachers constituted at least 40% of the sample. This helped us to analyse the gender-wise motivation to use ICT in accounting classroom. A questionnaire was prepared to gather the information from the deputed teachers on the integration of computerised accounting system in the accountancy curriculum at the higher secondary stage.

The survey was conducted with the following objectives:

1. To congregate the opinion of commerce teachers on the new course Computerised Accounting System for the upgradation of accounting curriculum at the higher secondary stage.
2. To ascertain the needs and apparent difficulties in handling this course effectively in the classroom.

The survey asked questions about the familiarity of the commerce teachers on the use of computers, capability of teachers to handle the topics of computerised accounting independently in classes XI and XII and finally an open ended question to express their viewpoint on the necessity of integrating ICT for the upgradation of commerce curriculum at the higher secondary stage. This enabled us to answer the following questions:

1. What are the factors that motivate a commerce teacher to teach the Computerised Accounting System course in classes XI and XII?
2. What are the factors that restrict a commerce teacher to teach the

Computerised Accounting System course?

3. Is there any significant difference between male and female commerce teachers on the use of computers in the accounting class?
4. Does any significant difference exist between the age and length of experience with the use of computers in the accounting class?

The findings of the survey revealed that all the teachers were well familiarised with the use of computers. This is because of the initiatives of Kendriya Vidyalaya Sangathan (KVS) such as computer literacy programmes extended to all Kendriya Vidyalaya teachers and all other administrative and support personnel for upgrading their skills in ICT operations. Also, the KVS has specifically carved a special component for computer education and applications in all the in-service teacher training programmes which are conducted every year for different subject areas across all stages of school education.

Despite this, the commerce teachers have less acquaintance with regard to the use of spreadsheet and Database Management system. This analysis formed the foremost basis for the unpopularity of the course amongst teachers which requires the knowledge of these two application software's, viz., Excel and Access for generating accounting information. Secondly, the information received from the survey clearly showed that the commerce teachers were not able to handle the chapters' relating to computerised accounting independently in the

classroom. It is worth noting here that these topics are included in the in Class XI as an 'entry gate' to the course of Computerised Accounting System in Class XII. They either take the help of the computer teacher to cover these lessons or simply desired not to teach these lessons given an opportunity to do so.

Lastly, while responding to the open ended question, nearly all commerce teachers agreed to the need for the integration of ICT leading to the upgradation of the commerce curriculum at the higher secondary stage. The findings of the survey revealed the following:

1. The commerce teachers felt the need for continuous training and support especially and exclusively for this new area. Similar to the science stream, they wished to have a separate computer lab and a separate slot in the school timetable for the commerce stream students for the effective teaching of this subject.
2. The conventional 'chalk and talk' method of teaching accounting emerged as a strong factor restricting the use of ICT in accounting. Respondents had a view that drawing up accounts on the black board helps the learner grasp the concepts of accounting easily. They felt that there is a possibility that students may get lost in using the application software alone leaving the accounting task at the back burner. However, as many as half of the respondents preferred a middle way, i.e., strengthening the accounting concepts using a black board and enabling students to design accounting reports for

generating accounting information in the form of small projects and classroom activities.

3. The male and female commerce teachers did not differ in their responses on the teaching of Computerised Accounting System course. Similarly, the assumption that commerce teachers in the older age bracket and with the more years of experience have loathing for ICT did not hold true. In fact, such senior commerce teachers desired to participate in the training programme on Computerised Accounting System and wished to learn more about this new and emerging area of study under commerce education at the higher secondary stage.

#### **Phase II: Teacher Education Programmes on CAS**

Teachers are the key agent for the success of any exercise for curricular reform in school education. Although the creative ideas for reforming education come from many sources, only the teachers can provide insights that emerge from intensive, direct experiences in the classroom *per se*. The revision in curriculum cannot be imposed on teachers from top to bottom or outside-in. If teachers are not sufficiently well prepared to introduce new contents and ways of teaching, they are unlikely to implement them energetically. This is equally true for Computerised Accounting System course because it is relatively a new concept which demands teachers to go beyond the boundaries of their subject specialisation.

It is not only the teaching style but also the learning style that is influenced by ICT. A shift is now seen from aiming at the mastery of discrete units of some fixed knowledge towards exploration, problem solving, decision making, i.e., from prescriptive classroom teaching to interactive group learning. The findings of the survey, reported in Phase I, generated the need for in-service teacher education programmes in computerised accounting system. In collaboration with Kendriya Vidyalaya Sangathan, the Department of Education in Social Sciences and Humanities (NCERT) conducted three programmes at KVS, NEHU Shillong, Zonal Institute of Education and Training (ZIET-KVS) located at Gwalior and Mysore respectively in the year 2009-10. The duration for the programme was for six days. Sixty five commerce teachers of Kendriya Vidyalaya Sangathan attended these programmes.

The objectives for organising these programmes were:

1. To acquaint teachers with recent trends and emerging practices in accounting discipline at the higher secondary stage.
2. To enable commerce teachers appreciate accounting as an information system and helping them move beyond the traditional boundaries of the discipline towards data representation and information generation.
3. To upgrade the skills of commerce teachers for using ICT in accounting.
4. To develop scientific approach towards the subject.

To support learning, the focus of these programmes was on data flow and generation of accounting information using application softwares: MS Access and MS Excel-2007. The content presentation was devised as 30% theory and 70% practicals. Throughout the course, the commerce PGTs were given hands-on training to use specified application softwares for generating required accounting information. The commerce teachers were encouraged to choose the topics from their syllabus as a part of small projects. Initially, the group had an inhibition on using the computer but gradually, as they built up confidence, they were able to develop small projects and activities like bank reconciliation statement, sales book and purchases book, calculating the amount of depreciation and preparation of an asset account, petty cash book, subscription account, loan repayment schedule, etc.

As the programme progressed, the teacher trainees were able to think of many other accounting tasks from Class XI and XII accountancy syllabus and were actively involved in developing student-friendly activities. The indications were quite clear. What is required is to enable commerce teachers recognise how technology can serve commerce education programme at the higher secondary stage and then provide access to training to them.

#### **Discussion and Suggestions**

The findings of the survey reflected the '5 A barriers' underlying the resistance of commerce teachers taking up this course effectively in the classroom. These are Attitude, Awareness, Application,

Access and Accomplishment (Mayya 2007). There is a natural tendency to resist new ways of doing things. 'Resistance to change' also denotes an important barrier which prevents the use of technology in accounting classroom. It is the attitude of our commerce teachers which is responsible to a great extent for the slow acceptance of ICT in educational setting. Such resistance is apparent in terms of teacher's unwillingness to change their teaching style and practice. They feel that it calls for fewer efforts to continue doing things the way they have always been done rather than to acquaint themselves to the new way of doing things. Most of the respondents held a view that textbook teaching should be the focus of instruction and a primary teaching learning tool for teaching accounting.

Secondly, the commerce teachers are aware to the terminology like e-mail, internet, word processing, file attaching and are also familiarised with the routine functioning of different computer applications. Still, they are unable and unaware that using electronic media as a tool in the classroom can be motivational and beneficial to commerce students.

Thirdly, the need for continuous training in the subject area emerged significantly for the effective implementation of this course at the higher secondary stage. Simply, focusing on the basic computer skills is not preparing the commerce PGTs to handle the Computerised Accounting System course independently. Differentiated mode of training may be devised to meet

the variety of needs and skill-level of teachers.

By varying delivery method, say from lecture to group activity to individual presentation, teachers can motivate the interest of students in accounting discipline to realise their full potential and at the same time maintaining academic standards.

Lastly, the advent of globalisation offers rethinking about the selection and delivery of instructional content and new sources of information in order to keep competence with knowledge. Such arguments require students to take active role in the learning process that consequently results in better student retention and performance. The teachers will now have to be co-learners with students as the areas of the frontline curriculum will generally be new as much for them as for their students.

### **Conclusion**

Accountancy being a skill subject to higher secondary students, a better achievement and well adjusted personality is essential for learning to be pleasurable (Babu and Kaliamoorthy, 2007). Rather, it lays more emphasis on memorisation, reliance on textbooks and regurgitates the 'trained monkey' approach. The teaching-learning practice is not effective to cater to the needs of business world. Data processing and information generation for the purpose of useful and timely decision making has to be an important part of accounting curriculum, can now be easily managed by anyone using technology. The students of accounting

are not exposed enough to the impact of technology on accounting practices and ways in which technology can be leverage to make business decisions easily.

Hence, it is explicit to renovate the

accounting education to become conversant with the current practices, which is the panorama of the skill development.

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