CHAPTER – 5

COMPUTERISATION IN BANKING OPERATIONS

USE OF COMPUTERS IN BANKING OPERATION

Electronic banking and information technology is the prime need of the hour. The upper most need for technological up-gradation and computerization for survival and success against the backdrop of highly competitive and fast changing banking scenario.

Indian banking has network of over 65000 branches, catering to more than 14.2 million customers, with Rs. 227462960 (In crore as on 31st March, 2006) deposits and processing daily 1.2 million cheques, over 3.3 million transactions and 1.3 million inter bank branch transfer. This massive volume of bookkeeping is presently tackled manually, which causes a serve strain on our systems and procedures. The computer can be effectively used to deal with the titanic volume of accounting and for administrative, planning, operations, projections, management information systems and communication network purpose in the Bank. Intermediate computer technology, in between the advanced electronic banking in the west
and the manual system prevalent in the Indian Banks is suitable for Indian Banking conditions.

A "mechanized branch accounting system" at the branch will efficiently cope with the volume and complexity of present day banking, along with specific manual procedures to supplement/control the machine processing. This will have uniform applicability. Additional dedicated system may be required at some branches, depending upon local conditions and the volume of a particular banking activity. Initially only the black functions will be mechanized and the front office function will continue to be manual every transaction input will be supported by a source document such as a voucher with the usual authorization and this will be batch processed later. The advantages of this strategy: if the system fails the branch will still have the manual procedure to fall back on the legal acceptance of magnetic media is still not clear, auditing methods for computer data are not fairly established. Previously about 1400 of the State Bank of India branches will be covered by mechanization, consisting of data entry machine, main computers, display screens, out printers and Winchester disk storage devices. This will lead to better house keeping in the branches. At present 3000 branches are fully computerized and working efficiently.

The clearance of cheques, in shorter possible time, in metropolitan and other big urban cities doing with the introduction of MICR
(Magnetic Ink Character Recognition) encoded negotiable instruments and computerized chairing cheques.

The information requirements of the various functionaries at branches, regional and local head office and central office for administrative and planning decisions is done, one the time-consuming, manual collection and compilation of data. There is abundance of outdated and unprocessed data at various levels. The computers will proceed into service to generate updated reports, processing vital current data. The quarterly data submitted by branches to zonal office will be reclassified 2700 reports by the computer thereby reducing workload. The computer will give information in areas such as credit appraisal, control over security of advances. Follow-up of bad/doubtful (Generally related to at present NPA) advances, special control over sick units, budget formulation, monitoring the performance in branches/various schemes, analysis of Bank's commitment in various acres and corresponding risks involved, etc. Payroll accounting and provident fund accounting also to be computerized.

As access to a first rate communication network, has become a prerequisite for any bank to engage in efficient banking business.

Communication, as cover the whole spectrum of Banking from the local bank to the global international networks. There is individual bank branches network system, which generally includes
telephones, telefaxes, office automation system and more electronic mail. For worldwide funds transfer, society for Worldwide Inter bank Financial Telecommunications (SWIFT) is the industry standard no back network is complete without a connection into it. SWIFT was established to create and operate a very specialized data processing and telecommunication system to process inter-bank financial transaction instructions between manager banks to an automated and highly secure environment.

Computers and communication technology has not only increased the competition among the financial institutions in general banks in particular, but have also opened new vistas for them to innovate themselves and come up with newer products and service. The credit cards and electronic purse are fast replacing type use of paper as a mode of funds transfer. The customer are poised to derive the benefits of anywhere, any time-banking which is gaining image acceptance, the banks are vying with each other to focus on their clients, and for this the banks are making extensive use of networked system-internet as well the intranet. Bankers also integrating the computer technology for developing and designing interactive multimedia based decision support systems. Globally, the trend is towards using computer technology for designing customer need products and services.
The computerization has direct impact on vital aspects of banks. All the major components of bank viz. its organizational structure, the customers, personnel and data evolve under the impact of technology and react to the changes. The technology (computerization) has rendered the organizations more compact with less of functional tiers, changed the job definitions and taken the decision making power to the point of information.

The banks have come out with newer products and service delivery systems. Banks have been able to meet his customer needs and have offered him convenient banking by applying technological innovations in their work place. This has also necessitated a complete up-gradation of the skill levels of he employee whereas some job professes for newer specialized skilled work force in the Banking industry. Training and retraining of staff and retention of highly specialized staff have become critical factors for banks for successful utilization of IT.
Computerization in all banks in Dehradun

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Bank</th>
<th>Branch</th>
<th>Date of Computerization</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Punjab National Bank</td>
<td>Clock Tower</td>
<td>02.09.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Race Course</td>
<td>02.11.96</td>
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<tr>
<td></td>
<td></td>
<td>Raja Road</td>
<td>06.11.98</td>
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<td></td>
<td></td>
<td>Tagore Villa</td>
<td>11.11.98</td>
</tr>
<tr>
<td>2</td>
<td>State Bank of India</td>
<td>Subhash Road</td>
<td>04.09.97</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rajpur Road</td>
<td>06.11.97</td>
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<tr>
<td></td>
<td></td>
<td>Hathi Barkala</td>
<td>08.11.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Astley Hall</td>
<td>09.11.98</td>
</tr>
<tr>
<td>3</td>
<td>Canara Bank</td>
<td>Clock Tower</td>
<td>14.02.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rajpur Road</td>
<td>12.04.98</td>
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<tr>
<td></td>
<td></td>
<td>Saharanpur Chowk</td>
<td>08.09.98</td>
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<tr>
<td></td>
<td></td>
<td>Rajpur Road</td>
<td>11.11.98</td>
</tr>
<tr>
<td>4</td>
<td>Bank of Baroda</td>
<td>Rajpur Road</td>
<td>02.04.97</td>
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<tr>
<td></td>
<td></td>
<td>Ballupur</td>
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<td>Kishan Nagar</td>
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<td></td>
<td></td>
<td>Mussoorie</td>
<td>06.11.99</td>
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</tbody>
</table>

Source: Compiled from data from various branches.
Table 5.1
SOFTWARE PACKAGES USED IN COMPUTERISATION IN SBI SOFTWARE / PACKAGE

A computerized branch is a branch of the bank using authorized legal software for its various Internal Accounting purpose. Authorized legal software is one, which has been approved by the appropriate authority at the Central Office Mumbai. The following are in use at presents.

<table>
<thead>
<tr>
<th></th>
<th>SOFTWARE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Bank Master</td>
<td>For handling accounting transactions on-line real time.</td>
</tr>
<tr>
<td>B</td>
<td>Ibsnet</td>
<td>For handling trade finance activities.</td>
</tr>
<tr>
<td>C</td>
<td>CMP, EFT, SWIFT etc.</td>
<td>For handling communication messages.</td>
</tr>
<tr>
<td>D</td>
<td>Forex-3</td>
<td>For F.E. Transactions to Foreign for consolidation of such reports.</td>
</tr>
<tr>
<td>E</td>
<td>Anti Virus</td>
<td>For protection against computer viruses</td>
</tr>
</tbody>
</table>
LOCAL AREA NET (COMPUTERISATION LAN)

A computer network is a collection of interlinked computers, which can communicate with one another. These are interconnected through cables, which interface with the computers through a Network Interface Card (NIC). A Local Area Network means different things to different people, depending upon their perception of what a LAN ought to do. A LAN is a collection of computers and other system located in close proximity, interconnected to enable their user to communicate with each other and share.

i. The costly hardware resources like large capacity hard disk drives, speed/laser printer etc.

ii. Expensive application software, which makes the PC more productive.

Present Bankmaster For handling accounting transactions on-line real time.
ATM (AUTOMATED TELLER MACHINE)

An Automated Teller Machine is a very user friendly machine that can render 24-hour service to help customers perform basic bank transactions like making deposits and withdrawals and also place requests for cheque books, etc. Where the ATM is connected online to a computerised branch, it is also possible to make equity of balances of accounts and also affect transfer of funds between accounts of a customer. Investment is a major factor. The cost of an ATM plus associated civil construction, electrical fitting, etc. Running cost including cost of electricity consumable etc. But since banks in India have started installing ATMs in large numbers, the cost of ATMs has been on downward plunge.

Deployment of ATMs help everyone involved in the process:

Customers: They save time and above all can transfer routine business without being bound by the rigidity of business hours.

Banks: Less crowding in the branches so that customers with more involved requirements like taking a loan or withdrawal of a large amount of cash can be serviced efficiently.

5.9
TYPES OF ATM IN USE

ATM is designed in many variations so that they can be placed within the premises or can be installed outside i.e. Front or Rear Services. The service approach can either be in the rear of the ATM or in the front. Wherever space is a constraint, the front service models are used. Free standing or through the wall free standing ATMs as preferred whenever ATMs are installed in the' lobby of banks/other buildings where the access is restricted to the period when the premises is accessible. Through the wall ATMs are installed such that access to them is possible at all times by using the ATM card. The Bank's goal is to have 1000 ATMs deployed all over the country by March 2002 which would include both networked and stand alone ATMs.

ELENOR

Elenor (An on-line real-time reporting package) for forex transactions from branches to FD Kolkata was launched on 15th December, 2000 in all forex intensive A&B category branches (444) to take care of all types of forex, transactions, including export, imports, inward and outward remittances, forward contract, FCNB loans etc. This does not need any manual intervention at FD and branches.
Elenor stands for Electronic Nostro Accounts Reconciliation. This project has been conceived in order to bring about a total system overhaul at Foreign Department Calcutta as their existing reporting and reconciliation procedures and system/networking infrastructure were not adequate to cope with the workload. It was also felt desirable to provide a comprehensive modem system that would ensure not only up-to-day basis but also obviate situations of forced provisions in respect of outstanding debit.

**IBSNET (TRADE FINANCE)**

IBSNET is a software for processing, documentary credit and collections at Branches conducting foreign exchange, letter of credit, guarantees and bill business. The system supports the issue of and amendment to inland and foreign letters of credit and negotiations of related bills, incoming and outgoing collections and related bills besides inland bank guarantees. IBSNET provides menu options to perform different operations at various processing stages. The system enables maintenance or customer wise liability accounts for all bills and contingent liability accounts in the accounting software.
SWIFT

SWIFT (Society for Worldwide Inter-bank Financial Tele-communication) is a global communication network which facilities members financial institutions worldwide to electronically transmit/exchange financial message/information in a reliable, secure, cost effective manner, through high-speed communication channels, using highly structured and standardized message formats. The designated Swift Operating Centre (SOC) having the Computer Based Terminal (CBT) for SWIFT operations is presently located in the International Service Branches (IBS), Mumbai. SWIFT is also operational in some of State Bank's foreign offices, viz New York, Los Angeles, Chicago, London, Frankfurt, Paris, Tokyo, Antwerp, Hong Kong and Singapore etc.

ELECTRONIC FUND TRANSFER (EFT)

The Electronic Fund Transfer (EFT), which is analogous to the TTs, make use of the DATANET services for transaction of financial Message and is operated at selected branches and is extended to selected high value clients.
ELECTRONIC MAIL (E-MAIL)

E-mail is a faster and cheaper way to communicate and send documents (message, data etc.). Better protection and privacy than fax or courier or telex. Inexpensive than telex and courier or fax. Structured messages making computerised processing easy. Sender get an acknowledge. If desired and user interface-highly user-friendly. SBI has been registered as an independent network on Internet and SBI-e-mail offers worldwide connectivity to all its user.

INTERNET

The Internet was primarily meant for academicians to exchange research information. The net as a global network is a success today, because of the bottom-up culture that it follows inexpensive access. The facility for sending data in any form-be it audio, video or text-made if extremely popular low-cost advertising and marketing on the Net encouraged the organisations to tap the potential of the Net. Internet user, the world's largest network of computers, are expected to number 20 crore globally by the turn of century from the present 2 crore with increasing commercialisation.
VSAT

VSAT is the acronym for Very Small Aperture Terminal. Basically it is a dish antenna alone with integrated unit installed at two or more locations between which communication is established. It relays communication through a satellite. It can transact high volume of voice, data and video. Terrestrial communication is possible only if the two locations are physically connected. This is normally done by laying cables enclosed in pipes communication through VSAT is also done through pipes, but they are invisible pipes in the sky.

CASH MANAGEMENT PRODUCT (CMP)

The Cash Management Product essentially involves speed collection of instruments, pooling of the proceeds at a central point and information sharing with corporate on all such remittance. It helps the companies to reduce their borrowing posts or maximize yield on investments and thus line-tune their cash management systems. Initially for Corporate Accounts Group (CAG) 'clients and later to be extended to all the bank's corporate customers in need of such an arrangement. The cash management services offered by the Bank make use of high technology and aim at effective marketing and efficient and flawless delivery.
STEPS

STEPS a fully automated electronic payments and settlement system called State Bank Electronic Payment System to handle interoffice transactions which do not require physical transfer of instruments/papers etc. from the originating to the destination branch for responding to the entries at the originating branch. The STEPS project has been conceived as a modem technology initiative and a cost effective integrated payment system solution, fully exploiting the present level of total branch computerization based on Bankmaster. It meets the ever-increasing customer demand for faster remittances and speedier collections and thus reduces customer complaints. To provide an almost instantaneous and automated reconciliation system for inter-office transactions between fully computerized branches. This will substantially reduces the pressures on the existing reconciliation system.

REMOTE BANKING

Remote Banking allows customers the facility to access bank account from their office through a computer, which is connected through a modem and telephone line. The functionalities include option of viewing and downloading of account balance and transaction details, query module, instruction module, mail etc.
This facility is being offered in around 70 branches and is used by more than 400 corporate customers.

REAL TIME PAYMENT SYSTEM

The bank introduced in January 2001 a new product called “e-Transfer” whereby at the customer’s request, the funds are transferred from one branch to another branch electronically with the result that the beneficiary’s account at the other branch is credited with the transferred amount almost instantaneously. The product is available to all banks, public sector undertakings and bank’s valued customers.

TELEBANKING

Introduced to provide enhanced facilities to customer and implemented so far on a pilot basis at 13 branches in Mumbai P-Segment.

Manual handling/processing capabilities were in adequate and induction of technological changes was not only necessary but also inevitable. Banking operations, therefore, were found to be a good case of mechanization / computerization.
AREAS FOR COMPUTERISATION / MECHANISATION

The various activities of banks depicted by the following characteristics, it is easy to identify and give preference to the areas that need to be covered by computerization / mechanization.

1. Sale of operation
2. Spread of branch network
3. Coverage of their network
4. Need for an effective control over widely dispersed branch network.
5. Vast human resources management.

Effective control over branches to ensure their efficient functioning is of greatest priority. This is possible only if work associated with proper maintenances of accounts, books and internal housekeeping is up-to-date. Improved customer services automatically follow if housekeeping is up-to-date and internal control is effective.

In view of this computerization / mechanization of day-to-day operations will improve housekeeping, effective control, and customer service and will generate sufficient capacity for handling more business.

5.17
Apart from day-to-day transactions other areas suitable for computerization mechanization are:

A. Clearing and collection operations.
B. Inter branch reconciliation.
C. Personal inventory and provident fund accounting.
D. Funds and investment management.
E. Assets and liabilities portfolio management.

Computerization / mechanization of banking operations would bring following developments:

1. Effective marketing of services
2. Speeding up delivery process
3. Better resources management
4. Improved management information system
5. Improvement in productivity and profitability
6. Generation of spare capacity
7. Job enrichment
8. On a more objectives basis identification of areas for mechanization / computerization rests on three consideration:
a) Volume and type of data required to be captured.
b) Objective of information to be extracted from these data and the type of processing involved.
c) The form in which this data is to be stored and retrieved later.

The objectives of computerization/mechanization of different levels ought to be as under:

**BRANCH LEVEL**

Improvement in customer service and quality of housekeeping. A logical by product of branch level operation would be generation of "books of accounts and data for control and management information systems.

The branch level master database of customer's accounts and general ledger can be stores at central place and terminals or nodes can be used to access them simultaneously to carry out daily transactions. The day book, supplements, cash book, trial balance, various statistical returns etc. can be generated, The computerization of front-office needs on-line real time data processing while back office can be based on batch processing. The solution of computerization of a branch may be centralized or distributed.

5.19
In centralized computing a mini-computer or a powerful PC can be used as a central machine and various terminals, attached to it. Terminals can be used for entering various transactions, printing of various statement and reports etc. The other approach is use of LAN. The dumb terminals or PC can be connected together with one powerful PC acting as serve.

ZONAL LEVEL

To store, analyze and retrieve data in formats useful for analyzing operational efficiency, formulation of management policies and the evaluation.

CORPORATE LEVEL

The data bases at the corporate level will have to serve the dual purpose of economic analysis for long terms planning and giving indicative signals, over a short term about organizational performance.

Two types of database are required for this purpose.

(a) The internal database is to be built from operational statistics originating from branch level transactions.
(b) The external database arises from the economic environment viz. financial economic and monetary statistical on domestic and foreign economic.

The machine has two main functions:

1. Posting of entry in primary ledger and
2. Writing of other books of account

It greatly facilitates balancing of books, Stand-alone functional machines can be developed for different counters, which serve.

➤ LIMITATIONS OF COMPUTERISATION

The bank started computerization of branches based on the Rangarajan Committee report in the eighties, going in the simple isolated applications at branch level. Most of the applications were based on DOS or UNIX computers and used either COBOL or simple packages such as DBASE, FOX-PRO etc. The different types of computer packages offering "Fully Computerized Branch" are available to computerize the various activities of a typical branch.

Computerising manual system is a trend that has caught on. Managers, typically are busy people and a computerisation initiative makes extra demands on a manager’s time. He may simply tell the systems man to go ahead with computerisation
without studying the processes involved.

A hastily decision on the kind of technology required may in more expenditure and all inefficient system. More manpower requirement because some banks have parallel manual and computerized system. This is a least risk strategy for the bankers. The bank may have double spending on computerization projects.

The database created by transactions at branch level is backed up periodically and stores in the cupboard to make disc space available for the next period. This is hardly made use of by the bank except to produce some mandatory report (which perhaps, nobody looks at seriously). It is not used by middle and strategic-level managers, even through such data a gold mine for effective decision. Partial manual processing is necessitated if a report is required from more than one isolated application.

Despite the capabilities of a computer system such as speed, accuracy, reliability and unlimited memory capacity, it has its own limitations.

**LACK OF COMMONSENSE**

A computer acts like human being but there is big difference between the machine and its master. The computer is only tool. It cannot think. It does not have commonsense or intelligence as well as we have.
INABILITY TO CORRECT

When we give instructions to a computer we must give the correct instructions. A computer cannot correct wrong instructions. This follows from the fact that a computer cannot use its brain because it does not have one.

INFLEXIBILITY

There are many aspects of a computer based information system that lend evidence to the charge that computers are inflexible. In a manual system, the boss can simply direct a couple of tasks in favour of a higher priority job. A scheduled production run on a computer can also be rescheduled but usually at a high cost to available person power and computer resources. As another example, the boss might ask the assistant to underline the names of all salespersons under quota on the weekly sales reports. This simple task could be accomplished in minutes in a manual environment. Such a request to computer would require approval, reprogramming and testing. Computers have no innate intelligence and accomplish no task unless specifically directed to do so.

5.23
COMPLEXITY

The complexity limitation is overrated. Computers and information systems are not complex at the user manager / executive level if they have acquired a thorough knowledge of the system.

COST

The cost limitation is also overrated, computer system are implemented because they, in same way, contribute to corporate profit. The initial investment is usually the primary obstacle, even though the pay back period may be as little as one to four years. With computer power becoming less expensive each year, computers remain one of the best investment corporation can make, the expenditure would be offset by an equal greater contribution to profit.

The major limitation is that computer is not having its own brain, feeling etc. through which it can solve any sort of sample or complex problem. Apart from the above. We cannot neglect the term ‘emotions’, which is always silent while discussing any technology. Since computer is also emotionless like other machines so it does not feel anything nor it tires due to figure.
RELIABLE PROGRAM WITH CORRECT DATA

A reliable program and correct data are must for desired output through computers. If any or both are incorrect, the computer cannot produce correct output. A program is reliable if it covers every possible situation to achieve the goal systematically.

SOUND LOGIC

Operations are limited by programming logic, stored in sequential steps instructing computer to do a certain thing or not. Logic of programs will naturally be analogous to programmer’s logic and no other logic will be considered by computer for that particular operation. Also current and prospective technological, social, economical and political changes will never be considered while making a decision or performing logical operation through computers because logic fed through program is devoid of these facts. Each step must be defined clearly and should logically lead to a specific good.

The types of limits to computer operation, namely INTERNAL and EXTERNAL.
INTERNAL

If incorrect information is fed to the computer, will give incorrect result. This is called Garbage In Garbage Out situation. A computer has no capability to anticipate nor can it think, reason or discover. It cannot take decisions of its own. If there is a slight variation in the instructions given and intended instruction, it has no means to instructions given and intended instruction it has no means to correct, it would obey the incorrect instructions. This is not the case with human being, he can detect the error and suggest action.

EXTERNAL

A fully programmed or wrong input data there could be errors due to power failures and voltage surges. The computer system are also able to open corruption due to viruses. Virus is a software programme that affects the integrity of the operating system and or data files. It may be introduced intentionally or by use of infected discs. Viruses are usually capable of reproducing themselves and spread rapidly throughout the computer system.

Another limitation with a computer system could be the absence of suitable security measures. If there is free access to the computer the data could be manipulated by an outsider.

5.26
Installing a computer system is quite expensive, moreover the lead-time of installing is long and the hardware technology is rapidly advancing, a computer may be technologically obsolete before this is installed. It is also difficult to get skilled computer professional due to lack of training facilities and increasing demand.

DEPENDENCE ON HUMAN INSTRUCTIONS

A computer cannot generate any information on its own. It can only do what it is told to do, i.e. why it is said Billion Dollar Human Brain, has made this Million Dollar Computer. So it follows that computer is only a tool but one that is extremely useful for us human beings. Computers are not originally creative and they would never be able to work. Hence require human control and command.

➤ IMPACT OF COMPUTERIZATION ON THE WORKFORCE

Some of the general issues that have concerned unions and employees, especially women, in the wake of the introduction of new technology in the banking and finance sectors have been:

- Prospects of job losses and declining employment levels.
- Increase in workloads.
- Pressure for flexibility.
- Changes in job contents.
- Increase in insecurity in the workplace, and loss of union power.
- Increase in the proportion of 'non-bargain able staff (i.e. those without an automatic right to unionize) as compared to the 'bargain able' staff.
- Changes in grading and pay.
- Changes in information and control.
- Changes in the autonomy of employees.
- Changes in health and safety conditions.

SOCIAL IMPACT OF COMPUTERISATION

In addition to affecting various management and business activities, computers are also exerting a significant influence on society as a whole. The discussions on computer implications for management would be incomplete if we do not consider the social impact at large. One of the important facts of use of computers in business is, it has had positive influence on non-business organizations as well as common people many of the sophisticated software products and computers based decision making tools have been adapted for the benefit of numerous non-business entities such as government units, hospitals, education etc. The software may deal with keeping medical records or controlling traffic on highways. It may be used for judging the credit-worthiness of customer or training' primary-schools students, all these issue involve people.
And undoubtedly computers have brought about lots of changes in the quality of life of the people.

Computer based training is one major use of computers in education. This method of training can be most effective supplementing the traditional teaching. Computers can be used for various lessons that take advantages of its capability. At the same time it can free the experienced teachers from the drudgery of routine tasks so that they will be able to deal with other problems. Students can continuously interact with a computer and can have immediate feedback. Animated characters can be displayed on terminals, which can be directly projected on a screen. This was not possible otherwise in a classroom situation.

Disabled or confined student can benefit immensely from computer based training some such devices are capable of providing audio responses and accepting verbal messages, as input. This can enormously help in teaching visually impaired people.

Apart from this a common man can also be benefitted with the use of computers in his day-to-day life. Computers plays major role in improving the quality of consumer-products. Computerized process control system are being used in chemical plants, steel, paper mills to monitor and control the quality of the product. During the process, instruments measure variables such as temperature, flow, pressure, etc.
If the process is deviating from acceptable quality standard, regulating devices are adjusted to bring the process back into control.

Business use of computers also improves customer service. Computer processing techniques make it possible to curtail the period needed for draft issue/payment/with others etc. One of the important areas of computer utilization that directly affects consumers, is POINT OF SALE (POS) services. They enable financial institutions to serve their customers of a number of convenient locations. POS terminals that are installed at a retailer store allow instant debit or credit in customer's as well as retail's account within help of cards. It has been observed that POS networks draw more customers at retailer's place (mostly urban city centers). It also reduce cheque losses and ensures more timely and direct verification procedures. One can conclude here that computers have brought enormous benefits to modern society and have indeed initiated improved state of health with greater longevity, higher standards of living and many other material benefits.

Computer systems have been taken on increasingly responsible tasks in business and consequently in the society. One such areas that has caused considerable concern is the effect of compressional on work force. Due to computerization, many processes in the factories / plants are automated.
The people who are directly affected by automation in their jobs and even in their private lives may get the feeling of alienation. It is a feeling of displacement or dissatisfaction, which results from the extensive use of machines that replace human activities. Many individuals may feel that due to automation, their jobs have become manual and unskilled. Such people may carry a feeling that they are helpless victims of a cold, impersonal and remote systems, which treat them a de-personalized members. Many experts call this phenomenon as dehumanization.

Few of the greatest threats in computerized society are, data and security and privacy. There may be tremendous administrative advantages in computerizing the information such as employee details, tax payments, health records, bank account etc. As long as the information remains available only to those who are concerned then it is reasonable. But the problem comes when the entire information is stored in large databases and there is a fear of machine being missed or abused for purpose of surveillance. In case, a proper care is not taken, the situation may lead to an infringement of individual privacy. Here the issue in not only the protection of personal data, but also the individual’s rights of accessing and modifying it. The confidential database consisting of defence secrets etc. must be protected from unauthorized exposure and piracy by potential mischief-makers.
Banks of Dehradun Branch with their working hours.

<table>
<thead>
<tr>
<th>S.No.</th>
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<th>Working Days</th>
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<tr>
<td></td>
<td><strong>PUNJAB NATIONAL BANK</strong></td>
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5.32
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*Source: Compiled from data from various branches.*

Table 5.2


REFERENCES


2. Ibid, p 563.


5. Ibid, p 2.


7. Ibid, p 42.

8. Ibid, p 44.


10 Ibid, p 3.


