Chapter VII
FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

Now-a-days higher education in India is hot topic for the discussion. The reasons are no single university or Institution from India get a rank in the world’s top 200 Universities. According to survey conducted by various world organizations; quality of higher education, employability of passed students, research undertaken by institution was not beneficial to the society, lack of technology driven learning and administration, obsolete curriculum and many more.

The researcher has observed the impact of e-Governance on the various stakeholders of the higher education institutions, such as Government, Universities, Sansthas, Colleges, Students, Faculties, and Citizens.

India has not fully reaped the benefits of ICT and e-Governance because it lacks the several things like healthy political and regulatory environments, well-developed ICT and legal infrastructure, data security etc. The public administration in India is undergoing a change. Most of the government as well as private organizations launched various e-governance websites but they lack inconsistency, transparency and reliability. As per Gartner four phase models, higher education in transit phase from 2 is entering in phase 3. Still we have miles to go to achieve e-governance in higher education.

7.2 Findings

Following are the findings of the study:

1. Majority of the stakeholders of higher education are students (59.70%) followed by the faculties (23.40%).
2. The students which are taking higher education mostly lies between 20 to 30 years age group.
3. Higher education Colleges/Institutions (63.18%) are located largely in urban area followed by Semi-Urban and Metropolitan cities (13.43% and 12.44% respectively).
4. Frequency of Female stakeholders was 31.50% whereas a Male stakeholder was 62.40%.
5. Out of total stakeholders 75.6% were Computer Literate.
6. Out of the total stakeholders 73.60% know Universities websites while 66.20% know Colleges / Institutes websites.
7. Interesting facts is that instead of knowing the Operating System to the stakeholders, they know more MS-Office and web browsers.

8. Earlier stakeholders were using Desktop PCs for accessing internet. Now-a-days the trend is changing and stakeholders using Cell phones and Note pads more.

9. International language English remains a predominant language to display website contents (78.87%). Some Universities trying to provide content regional Languages as well (14.55%).

10. Out of total Colleges / Institutes 85.57% are having their separate internet lab in their campus.

11. Majority of the colleges / Institutes 56.31% prefer technology for accessing internet services is **Land Line Broad Band** followed by **Fiber-To-The-Home** (FTTH) 11.71%.

12. Less number of (30.50%) stakeholders partially know IT Act 2000. Most of them are HR-Managers (90%) and IT Nodal officers (57.14%) of the Universities.

13. 45.51% stakeholders pointed that Technical obstacles are the major problem faced by the Institutions in using e-Governance.

14. Stakeholders are given the ranks to the objectives of e-Governance as follows:
   i. Transparency  
   ii. Accountability  
   iii. Simple  
   iv. Fast Communication  
   v. Convenience ( 24 x 7)  
   vi. Efficient  
   vii. Improves Public Relations  
   viii. Responsiveness  
   ix. Reducing cost  
   x. Secured

15. Majority of the stakeholders (63.70%) don’t know the concept of m-Governance.

16. Majority (46.27%) of the higher education Institutions are private, followed by the Public.

17. Only 20.4% stakeholders claimed that employability of the Graduate students in the state is very effective.

18. **Strong Leadership** is the master key for effective implementation of e-Governance in higher education Institutions.

19. 39.9% stakeholders “Disagree” and 31.9% stakeholders are “Strongly Disagree”, about the statement that the use of e-Governance services is wastage of money.
20. Electricity and Internet access are also an important problem in the use of e-Governance in higher education.

21. m-Governance is not a replacement for e-Governance, rather it complements to e-Governance. Because e-Governance lays the foundation for m-Governance.

22. Majority of stakeholders (46.27%) belong to Private higher education Institutions followed by Public institutions (35.32%). Most of the Institutes/Colleges (33.33%) strength lies between 1001 and 5000. While 9.95% Institutes/Colleges strength is above 50,000.

23. According to 49.3% stakeholders National policies adopted by Government of India for higher education are somewhat effective. Because in higher education dropout rate is high. Therefore Gross Enrolment Ratio (GER) is low.

24. In 2011 under graduate enrolment in higher education was 23.3%; whereas Gross Enrolment Ratio (GER) in India was 17.3%. Under graduation enrolment in higher education in the state was 58.2% and GER was 27.4%. It means it was higher than the Nation.

25. The outbound rate is high in higher education in the state as compare to inbound rate.

26. Excellence, equity and efficiency are interlinked and go hand-in-hand, as they affect one on the other. The survey illustrates, due to national polices the efficiency of higher education is effective.

27. The international mobility of the faculty is not so effective.

28. According to the students there is co-ordination between higher education institutions and Industry. But Majority of the HR Manager said that there is lack of co-ordination.

29. e-Governance change the way teaching was imparted. The lectures where delivered to the Metropolitan and Urban students can be delivered to rural students through video conferencing or uploading it on the cloud base network like YouTube.

30. The study indicates that implementing e-Governance in higher educational Institutions lead to the changes in an organizations functioning by adopting new skills. It helps to improve public services and democratic processes.

31. e-Governance definitely empower the stakeholders of higher education institution.

32. e-Governance implementation is not wastage of money.

33. Majority of the higher education students’ feels they get quality education. But employer doesn’t feel so.
34. On University website stakeholders are getting following information:
   i. Examinations Notifications and Results.
   ii. Admission Procedures.
   iii. Student and Staff Notifications.
   iv. On-line Registrations.
   v. Various Circulars.
   vi. News and Event related to University.
   vii. Grant and Finance.

b. On College website stakeholders are getting following information:
   i. Information of Colleges and Courses.
   ii. Intake Availability.
   iii. College Approval.
   iv. Administration.
   v. Alumni.

c. Government website stakeholders are getting following Information:
   i. Students Scholarship.
   ii. Government Circulars.
   iii. UGC/AICTE Norms.

35. According to study in census 2011, the literacy rate in Maharashtra state was 82.91%, the male literacy rate was 89.82% and female literacy rate was 75.48%. While in India, the overall literacy rate was 64.80%, the male literacy rate was 75.30% and that for females was 53.70%. Literacy rate in the state is higher than country.
7.3 Conclusions

The researcher has drawn the important conclusions on implantation of e-Governance in higher education Institutions in Maharashtra. These conclusions are also analysed as follows:

1. There is positive relationship between e-Governance and effective Management of Higher educational Institutions. If any organisation is adopting 100% e-governance for its functioning, then effective management in higher education institutions is possible. They maintain Transparency, Accountability, Accuracy, Increase efficiency as well as simplify the procedure, Convenience the access (24 X 7) and Speedy communications is possible.

2. e-Governance is playing a dominant role for the balanced regional development of educational facilities in Maharashtra. When e-Governance is implemented geographically in proper ways desperate students and faculties are much benefited by the e-Governance.

3. According to our study e-Governance is not beneficial for the development and empowerment of the stakeholders. Because most of the colleges foster the academic development of their students by providing digital gadgets as a tool. The modern gadgets like ICTs and e-Governance or m-Governance must be available to them. But these tools are not available in rural and semi-urban colleges to improve academic record.

4. Most of the higher educational Colleges and Institutions establish in metro or urban area having dynamic websites. They all are trying hard to provide on-line merit list and admissions etc. If they don’t have on-line, they mostly have computerised admission system; through it they generate MIS report. Most of the colleges have their own websites. Some rural and semi-urban colleges don’t have a websites even if they are having websites. These are not in operation.

5. Today, we know that the knowledge society is empowered society. Only educated and knowledgeable citizens are responsible to the good governance. By using the ICTs in government we are able to use e-Governance not only in government sector but in higher educational sector as well. e-Governance can serve a variety objectives as per the stakeholders perspective. They are increased transparency, maintain accountability, simplicity, it can be better delivery of quality government services, greater convenience( 24 x 7), increase efficiency, and Improves public relation, cost reduction, revenue growth and/or less corruption.
6. Our study indicates there is no any communication medium exist between different stakeholders in higher education institutions. We know that stakeholders access websites and there is provision of feedback or sending the e-mails from different service providers. Even stakeholders sending query they are not responded immediately. There is no common platform to all stakeholders to share their views.

7. Higher education institutions can have interface with their stakeholders. Student’s voice can hardly be heard by the Universities and governing bodies of the Governments.

8. The researcher has pointed four Models for effective implementation of e-Governance in educational institutions in Maharashtra.
   a) Digital University
   b) Virtual University
   c) One-Stop Portal
   d) Public Private Participations

   As per the study the majority of the stakeholders are opted the Digital University Model as the e-Governance model for the higher education Institutions in Maharashtra. Therefore this model is preferable.

9. Most of the stakeholders of HEI are computer literate.

10. Most of the students (76.6%) have completed their higher education in urban and semi-urban area.

11. Information Technology Literacy rate in the state in the higher education is high i.e. 75.6%. It’s good for the implementation of e-Governance.

12. Most of the stakeholders in higher education used gadget for accessing internet as Desktop PC 38.56%, followed by Laptop 31.12%, Cell Phone 27.13%, Put firm step by Note as well.

13. Majority of the respondents (73.60%) know University websites. Only 16.90% are very satisfied with university websites and 55.70% stakeholders are somewhat satisfied. Most of the stakeholders have given first rank to university website for searching educational information much faster. Flip side of it is 20.90% stakeholders don’t know the university websites; this number is also not negligible.

14. As compared to University website, only 66.20% know college/institute websites. 17.90% stakeholders either they don’t know or they have not answered about college websites. From the above two points it is clear that, students are more reliant on university websites.
15. Higher education stakeholders prefer English language for website contents their percentage is 78.87%, reasons they specify as English is the Universal Language, Easy to Understand, Device Ready, Contents can be easily updated.

16. According to study 89.6% respondents using computers and nearly all of them 88.60% also utilize the internet whereas 61.70% respondents use computers more than 6 years and 49.80% use internet more than 6 years. 49.80% respondents are very good familiar with the utilization of ICT.

17. A very less number of stakeholders (30.30%) are aware of the Information Technology Act 2000. It means that they are not much aware about legal provisions of the IT.

18. There is very less communication between the stakeholders of higher education. Because lack of integrated services between Government, Universities, Sansthas and Colleges. Therefore policies should be adopted by one are not known to the other. In short there is no integrated communication channel is in exists.

19. Use of e-government can improve the transparency and reduce corruption in the public sector. But sometimes it is true and some time it is false because in actual field some time both increase or one increase and other decreases.

20. The Major deficiencies in implementation of e-Governance in higher education institution are:
   a. Lack of effective Leadership.
   b. Lack of standard e-governance Architecture.
   c. Absence of appointment of third party for monitoring and maintaining web contents.
   d. Lack of Economical and Social development of stakeholders.
   e. Lots of Government restrictions.

21. Following are the major deficiencies in the utilization of e-Governance in Higher educational Institutions in Maharashtra:

   a) Lack of IT Infrastructure:
      i. Low bandwidth of internet in Urban, Semi-urban and Rural Areas.
      ii. No Internet connectivity is available in the rural colleges/Institutions
      iii. Most of the colleges we find that there is no separate provision of internet lab.
      iv. The PC they are utilizing for accessing the net are not having latest hardware and Software configuration.
      v. Most of the students can’t realise the importance of IT Literacy. So IT literacy is much lower in semi-urban and rural area. They have knowledge of computer but they don’t have practical hands on it.
b) Resistance to change in work culture:

i. As study proves that employee have knowledge of computer. But they don’t want to change the working style.
ii. They don’t want to switch from off-line to on-line transactions.
iii. They may feel that they are losing the control of the work they are doing.
iv. Traditional attitude of government departments.
v. The Psychology of government servants.

c) Legal Issues: Most of the stakeholders don’t know the IT Act 2000 by Government of India. Only the stakeholders like CEO, HR-Managers, IT Nodal Officers are more aware of IT Act.

d) e-Transactions are not allowed Universities and Institutional websites. They insist for filling on-line forms but not for on-line payments.

e) Economical Issues like Initial high development cost and low returns

f) Social Issues like Poverty allegations.
7.4 Recommendations:

1. e-Governance is playing a vital role in effective management of higher educational Institute. Therefore each and every institute should utilise e-Governance as a tool for the effective management and development.

2. Implementation of e-Governance is like a two edges sword. If we utilise it properly, it is beneficial for balanced regional development of stakeholders of higher educational institutions. If not, it creates regional imbalances. If Internet access is not distributed equally within or between regions in the state, it digitally divides stakeholders “the gap between stakeholders with effective access to ICTs, and those with very limited or no access”. Therefore, if we arrange Video conferencing, on-line lectures for rural students, then we can setup regional balanced in HEI. As well as Maharashtra Government should provide a grant for the development of ICT infrastructure in the colleges located at rural and semi-urban area.

3. Some of the Colleges are located in rural and semi urban areas. There is lack of IT infrastructure in term of internet connectivity and bandwidth. In coming years government should provide it in all geographical locations. So the empowerment of stakeholders is possible.

4. All rural and semi-urban colleges must have computer system. If they don’t have then they must purchase it form University or UGC grants. They must get internet connection either through BSNL or get it from private Internet Service Providers (ISP). Government or University must insist to inspect the website of colleges at regular interval whether it is in operation or not. If not, insist them to keep it in operation.

5. The overall scenario of higher education in India does not match with the global quality standards. Institutions must follow global quality norms in relation to the their internal resources, fully qualified faculty with an impressive set of degrees which accomplish their satisfaction, number of books and journals in the library, an ultra-modern campus, and size of the endowment, etc. Everybody in the organization is accountable and transparent to his work; if e-Governance is successfully implemented. Every higher educational institution must adopt e-governance as early as possible. Then quality will improve automatically.

6. If we develop model or messenger for seamless transfer of information between offices, public administration, Universities, Sansthas, Colleges / Institutes, Industries and Government and Government appointed bodies like UGC, AICTE, DTE, MCI etc. then major decisions of higher authority passes or conveys
immediately to every concern stakeholders. Therefore effective communication is possible between stakeholders.

7. If we develop state level cloud base stakeholders data hub, then it every stakeholder should participate in decision making. They place their suggestions without any hesitations and get gentle feedback from University or College administration. Then it is definitely beneficial to the stakeholder therefore we should develop state level cloud base data hub.

8. Some of the Universities in the Maharashtra and Rajasthan have opted MKCL’s Digital University model for implementation of e-Governance. Instead of designing multi portal of different Universities, if they design single portal for one state which contains the links of all Universities. Stakeholders of higher education get switched easily from one University portal to another. Therefore unique data hub on a Cloud base System should be developed.

9. Most of the students in the age groups (20 to 30) are in mobile phobia. So develop e-Governance e-Apps (i.e. Mobile Apps) work like m-Governance apps that. Easy to use.

10. If we develop the e-Apps that can work as affordable device. Because the students lived in semi-urban area their economic position is not sound; but at the same time to see that apps should not feel useless to the urban students.

11. Not only the literacy rate and economical condition of citizens are good but Information Technology literacy rate is quite high in higher educational institutions in the state. Therefore it is easy to us to implement e-Governance effectively.

12. Most of the stakeholders of HEI using electronic gadget to implement e-Governance or even m-Governance is also feasible in the higher educational Institutions in the state.

13. University web portal is much familiar with the stakeholders because it provides most of the educational information on it. 25% stakeholders don’t know university website. If colleges arrange workshops, seminars for website awareness and utilization programs for them then they must familiar with University websites.

14. Colleges’ websites are used by students but their percentage is less as compared to University websites. If colleges regularly update their websites then students regularly hits. They should provide dynamic content. They must keep alumni records etc.

15. Majority of the stakeholders prefer English language for website contents. It’s good along with it Universities and Colleges provide web content in regional languages as well.
16. Instead of directly forcing stakeholders to use Internet. We simply promote them first use Computers. Because those who use computer they automatically get the knowledge how to use Internet.

17. Most of the stakeholder not much aware about the IT Act 2000. Cyber world is expanding very rapidly. Crimes in the field are also spreading with the same rate. So Legal awareness is must for the stakeholders of HEI. It should be created by the Government and University through counseling.

18. Integrated communication channel should be adopted by Government, University, Sansthas and colleges for the effective co-ordination between stakeholders.

19. Government / Expert should develop the technique of e-Governance in a way through which we can improve the transparency and reduce the corruption at one and the same time.

20. For effective implementation of e-Governance in higher education institutions following measures should be taken:
   i. Create effective Leadership.
   ii. Develop standard e-Governance Architecture.
   iii. Appoint of third party for monitoring and maintaining web contents.
   iv. Economic and Social development of stakeholders.
   v. Withdrawal of some Government restrictions.

21. Measures to overcome from the deficiencies in the utilization of e-Governance in Higher Education Institutions in Maharashtra:
   a. IT Infrastructure
      i. Increase/ improve the bandwidth in Urban, Semi –urban and rural area as well.
      ii. Government and Telephone authorities should provide internet connection in Rural Colleges.
      iii. Establish separate Net lab in all campus or give Wi-Fi connectivity in College campus.
      iv. Promote IT Literacy Mission in the state.
      v. Practical Hand on must be given to Rural students.

   b. Work Culture
      i. Arrange ICT workaholic workshops for Government employees.
      ii. Promote on-Line transactions.
      iii. Arrange Psychological training for the employees for creating awareness of e-Governance.
      iv. Arrange combine e-Governance training programs and workshops for government employees with private employees; conduct their on-line examination after workshop. Compares their result with private employees.
c. **Legal Issues**  
   i. Internet Security and IT Act Diploma should compulsory to all managers and operators.  
   ii. Ethical guidelines should be given for the utilization of social media.

d. **E-Transactions** like payment of admission and examination fees must be on-line i.e. incorporate e-commerce in e-Governance.

e. **Economical Issues** like develop standard e-Governance model like Digital University so that development and operational cost will be reduced.

f. **Social Issues** i.e. Government and NGOs must take initiative to increase financial strength of every citizen to afford IT Services.

### 7.5 Scope for further research

A study of e-Governance in Higher Education Institutions in Maharashtra is not only beneficial to the researcher; it is beneficial to the State Government, HRD Ministry of Government of India, Universities, Institutions and Citizens. Therefore in future potential researcher can select the topic related to develop one-stop-portal for the State or Nation.

At present m-Governance is complementary to the e-Governance and its developing swiftly, therefore potential researcher can research on m-Governance with future trends in ICT sector.