Chapter 5

Findings, Suggestions and Conclusion

5.1 Summary and Conclusion

5.1.1 Qualification wise distribution of science teachers

The findings of the study show that majority of science teachers having NET/ SET qualified (27.75%) and 26.79% science teachers get Ph.D. in their subject and only 13.75% science teachers qualification are NET/SET with Ph.D.

5.1.2 Distribution of science teachers by designation

The finding of designation wise analysis reveal that majority of the science teachers are assistant professor (74.64%) and 20.57% science teachers are associate professor.

5.1.3 District wise distribution of respondents

The finding district wise of respondents majority of the science teachers are belong to Jalgaon district (44.00%) and 33.33% science teachers belong to Dhule district.

5.1.4 Gender wise distribution of respondents

The findings of gender wise distribution reveal that majority of the respondents are male (74.64) and only 25.35% respondents are female category.

5.1.5 Age groups of respondents

The finding of age group wise distribution of respondents 40.66% science teachers are belong to 31-40 age group and 33.49% respondents belong to 21-30 age group. Majority of the science teachers belong to 31-40 age groups.
5.1.6 Distribution of respondents on the basis of computer knowledge

Computer is the main part of human life also its use for teaching, learning and research process. Majority of science teachers 97.12% have good knowledge of computer and internet accessing.

5.1.7 Materials search on internet by respondents

On the internet many electronic resources are available for the various purpose. Majority of the respondents 89.47% search current information on the internet, 79.42% science teachers search electronic journals and 74.00% science teachers search electronic books on the internet and 78.46% users search information for teaching process.

5.1.8 Users opinion about internet based services is useful for academic Purpose

The study shows that majority of the respondents 38.27% are not sure about blogs is useful, 45.93% users not sure about e-news papers, 50.23 % users strongly agree to e-mail services are useful for academic purpose and 50.71% users are not sure about usefulness of subject gateways.

5.1.9 Problems faced by respondents while using internet

The finding of the study show that the 26.31% users do not get needed information, 33.01% users lack of internet training face by science teachers, 36.84% users internet connection problem face in rural area because of their poor internet connection and 10.52% science teachers arise networking problem while accessing internet.

5.1.10 Users opinion about internet is a information sources

It could identified above the table majority of the respondents 58.37% opinion agree about related information are available on the internet, 50.71% users are agree to
internet is easy to access, Majority of the 70.33% science teachers are agree about internet provide high speed of retrieval of information and 55.02% users opinion are agree about internet provide very huge information to users, 31.57% science teachers opinion are strongly about internet is useful for teaching and academic development purpose and 15.78% users strongly agree to internet has save the time of users.

5.1.11 Experience of using internet by science teachers

Study shows that majority of the respondents 58.37% having more than 6 years experience of accessing internet, 21.53% science teachers having 4 to 5 years experience of accessing internet and 20.09% users having 2 to 3 years experience of accessing internet.

5.1.12 Users opinion about e-mail service providers

The finding of the study shows that majority of the science teachers 64.59% says that gmail.com service provider are very efficient for any work, 48.80% users says that yahoo.com service is efficient for any purpose, 59.33% users opinion are rediffmail.com e-mail service provider is efficient and except yahoo.com, rediffmail.com, gmail.com majority respondents are don’t know about many e-mail providers.

5.1.13 Time spent for using internet

Finding of the study shows that majority 31.57% respondents using internet from 2 Pm to 12 am, 23.92% users use internet form 8 am to 12pm, 19.61% users use internet from 6 am to 9.00 pm and 24.88% users use internet any time to when needed.

5.1.14 Time spent on internet for accessing information

Finding of the study shows that majority 46.6% science teachers searching information on the internet from 3 to 6 hours in a week, 10.52% users accessing information on the internet of less than 2 hours in a week, 33.97% science teachers
access internet for getting information from 7 to 10 hours in a week, only 4.7% users spent 10 to 14 hours in a week for accessing information and 4.30% science teachers daily 5 to 6 hours spent on internet for accessing information.

### 5.1.15 Aims of using internet

The study shows that the majority users used internet for various purpose as like 89.95% respondents used internet for completed their research work because of internet provide newly information on the related subject, same users used internet for getting subject knowledge, overall majority 98.56% science teachers used internet getting update knowledge, 76.07% users use internet for entertainment and chatting.

### 5.1.16 Usefulness of internet services for teaching and learning process

Internet provide various services for the users but science teachers use many services as like majority of the users 96.65% used electronic books and e-journals for teaching and learning process, 85.16% users used internet for communicate with the help of whatsapp, 89.95% science teachers says that internet has provide current information and 15.03% science teachers use encyclopedia for referencing.

### 5.1.17 Electronic resources used by respondents

Study show that internet has provide various internet sources for teaching and learning. 96.65% users used internet for research process because internet has provide current information to related their subject,89.95% science teachers used electronic books and journals for research because e-journals provide new trends in their subjects, 63.15% users used online dictionary for understanding meaning of subjects. Internet has provide free of cost online dictionary and 42.00% users used internet for searching online thesis as like shodhganga provide lot of online thesis so many researcher use online thesis for guideline for their subject.
5.1.18 Users opinion about features of e-resources

Use of electronic resources is continuously increased in modern digital era because of various useful features provide by users. Study indicate that according to 59.80% science teachers e-resources we can access without boundaries, same percentage users opinion are agree to electronic resources provide update information, 53.58% users opinion are agree to with the help of e-resources users save the time and money, 57.41% users agree with e-resources are easy to transfer to any other person, 45.93% users opinion are agree to e-resources are easy to access and 30% users strongly agree to internet information is easy to transfer to another person.

5.1.19 Types of e-resources used by science teachers

The study shows that majority of the science teachers 76.07% used electronic journals for completed their purpose, 68.89% respondents access e-books with the help of computer of mobile, E-thesis and dissertation materials 47.36% users used for purpose, 27.75% users use e-magazine for further study, 33.97% science teachers used e-reports with the help of internet and 31.57% users use bibliographic database for further research and study.

5.1.20 Aims of using electronic resources

In the modern digital era lot of e-resources increased in day by day and users increased day by day. Study shows that 97.60% users used e-resources for getting current information, 89.47% users used e-resources for paper published because of UGC introduced API so majority science teachers engaged in paper published in various journals and conferences, 68.89% users used e-resources for getting effective information, 90.43% science teachers used electronic resources for research purpose because of majority science teachers are engaged in research publications and 47.36% science teachers are used e-resources for getting general information in daily life.
5.1.21 frequency of used electronic resources by respondents

It could be identified the above table majority of the respondents access electronic resources in daily (65.07%), 15.31% science teachers access e-resources when needed, 5.74% users access e-resources two in a week, 4.78% respondent used e-resources occasionally and 4.78% science teachers access electronic resources two in a month for completed their purpose.

5.1.22 Users opinion towards e-resources is useful for teaching

The finding shows that majority of science teachers 48.80% users opinion are agree with electronic resources are very useful for teaching process, 7.17% users are strongly agree with users save the time with the help of e-resources, 19.61% users are not sure about save the time, 48.80% users opinion are agree with electronic resources provide reputed information, 47.36% users says that e-resources provide update information so they are agree, 48.80% science teachers says that e-resources provide needed information, 50.71% users are agree to e-resources are use anywhere and 33.97% users are strongly agree to access anywhere.

5.1.23 place of using electronic resources

Study indicate that majority of science teachers (50.23%) used e-resources at their home, 48.32% users access e-resources at their staff room / departments, 33.01% users access electronic resources at their library, 35.00% science teachers used e-resources at a journey time and 15.31% users access e-resources at any time when essential and only 9.36% science teachers go to computer café for accessing electronic resources.

5.1.24 Types of e-resources are available on the internet

Study shows that 58.57% respondents says that online journals are available on the internet with free of cost, 55.02% science teachers says that N-LIST provides various online journals and books, 31.57% science teachers says that open access journals are available on the internet, 10.52% users access video books via internet.
5.1.25 Types of materials search by users on internet

Internet provide very huge information to users so majority science teachers 68.89% search reference documents, 53.58% users search current information, 58.37 % users search electronic journals, 37.32% users search journal abstracts, 42.10% science teachers search information for teaching.

5.1.26 Extent of access e-resources through various forms

The finding of the study that majority of the science teachers 58.37% using electronic resources by self because of science teachers are independent other than social science teachers, 26.31% respondents used electronic resources with the help of friends and other staff. Majority of experienced teachers give help from other and new assistant professor for accessing electronic resources, 10.04% science teachers use e-resources with the guidance from librarian and library staff, only 9.56% users used e-resources due to the formal training and computer science workshop and 14.83% users use e-resources with the help of other ways.

5.1.27 Problems while accessing e-resources

Finding of the study shows that various problems faced by respondents while accessing electronic resources. 16.74% science teachers are faced finding problems often, 30.14% users face speed of download problems while accessing electronic resources, 16.74% science teachers face accessing problems due to the lack of internet training, 21.05% science teachers do not get proper information because of huge information are available on internet and selection of information source is very big challenges to science teachers, 42.10% science teachers e-resources are properly not access due to the lack of searching knowledge, 11.48% users face poor electricity while accessing e-resources and 37.79% science teachers face technical barriers problems while accessing e-resources due to the lack of technical knowledge.

5.1.28 ranking of search engine by users

Finding shows that majority of the science teachers 95.21% given rank no 1 to Google search engine due to the users friendly search engine, 31.57% users given
second number to yahoo search engine, 58.85 % science teachers given rank no second to Google scholar.

5.1.29 Role of e-resources

63.15% science teachers access electronic resources for the getting current information, 47.30% users use due to easier of other print resources, 67.94% user’s access e-resources for quick access, 42.10% user’s access electronic resources because of they provide huge information about their subject and 67.46% users used e-resources for development of teaching process.

5.1.30 User’s opinion about increased of electronic resources in modern era

Finding of the study shows that 39.23% science teachers opinion are strongly agree to increased in e-resources in modern era, 48.32% users are agree to increased of electronic resources in modern digital era due to the development of information and communication technology and only 7.65% science teachers says that I don’t know about increased of electronic resources.

5.1.31 Science teacher’s opinion with e-resources is sufficient for getting information in the present day

Majority of the science teachers 43.54% are agree to electronic resources are sufficient for acquire information in the present day, 41.62% users agree to sufficient of getting information through the electronic resources, 8.00% users opinion are disagree to electronic resources.

5.1.32 Effects of e-resources on print material according to science teachers

The finding of the study shows that 21.53% science teachers opinion are strongly agree with its badly effects on convention materials, 20.57% users are agree to effects on print materials, 47.84% science teachers opinion are disagree with effects of electronic materials badly effects on print materials as like books, periodical and other print materials.
5.1.33 Users opinion about electronic resources badly effects of human health

Study shows that 26.31% science teachers opinion are strongly agree to bad effects of electronic resources on human health, 49.28% majority of science teachers are agree to electronic resources badly effect on human health as like eyes, brains and other parts of human life, very few 11.03% users are disagree to effects of e-resources on human health and 7.65% users says that I don’t know about effects of human health.

5.1.34 various tools used by science teachers for accessing e-resources

Majority of the 78.94% respondents used computer for accessing electronic resources compare to other tools, 27.75% users use android mobile for accessing e-resources and 37032% respondents have a laptop for accessing e-resources.

5.1.35 various problems faced by users while accessing internet on mobile

Mobile is the part of life so every science teachers have a mobile. With the help of mobile science teachers have access e-resources as like e-books., e-journals etc. but various problems faced by users while accessing e-resources on the mobile as like:58.85% users face lack of internet speed, 26.79% wastage time, 37.32 % expansive for use and 15.78% users face battery backup problems.

5.1.36 Reason of using mobile

85.16% users use mobile for accessing whatsapp, 18.17% users use mobile for face book social media, 48.32% science teacher’s access e-mail on mobile, 96.65% users chatting and communication with the help of mobile.

5.1.37 Users awareness of N-List consortium

Science teachers access electronic resources with the help of N-List because of majority science subject covered by N-List so majority of the 78.46% teachers are aware about N-List consortium.
5.2 Suggestions

1. Create awareness is necessary among science teachers about benefits and role of internet in teaching, learning and research process.

2. Encourage more and more science teachers to access electronic resources because of e-resources are provides continuously update knowledge.

3. Organize various training workshop for improve the efficiency of the use of accessing e-resources as like short term course about how to use electronic resources, users orientation program about role of internet in teaching and research process.

4. Requirements to provide science teachers about use of electronic resources to overcome the problems faced by users while accessing internet and e-resources.

5. Provide infrastructural facilities to science teachers such as internet facility, Wi-Fi network facility should be provide within the campus of the college for accessing internet and electronic resources.

6. College should be providing sufficient number of computer system and printer for accessing internet and electronic resources.

7. Users education is necessary to science teachers regarding internet, search engine, advanced search facility, OPAC and electronic resources from various websites.

8. To take step the state government, college authority, UGC and other agencies to provide internet facility in college campus for accessing internet and electronic resources.

9. All departments of the colleges connected with Local Area Network facility for downloading information from central library for the science teachers.

10. The science teachers should be taught about search strategies and use of bullion operators for searching information on the internet as like AND OR NOT.

11. A college library should good and user friendly software used for management of electronic resources for science teachers they access OPAC and other online e-resources provide by library.
12. Central library should be participate in local, regional and national level consortium as like N-LIST, INFLIBNET, UGC- Infonet, INDEST, DELNET etc.

13. Every science teachers should parches lap top, computer and other means of information and communication technology for accessing internet and electronic resources.

14. Central library should provide good man power, trained library staff for guidance to science teachers for accessing and using electronic resources.

15. Science teachers should install internet connection at their home for the accessing internet and electronic resources because of they have access internet any time.

16. Create awareness about internet as an powerful information source. There is need to aware sense of acceptance to the internet technology for the science teachers.

17. The college should strategically plan to check the proper use of internet for teaching, learning and research process only.

18. Create awareness among various internet services provide to users as like FTP, TELNET, Discussion forums, online database, OPAC and chatting.

19. Financial grants, loan schemes, as well as other forms of financial assistance should be put in place of departments, libraries and college campus for encourage and promoted science faculty to electronic resources as like e-books, e-journals and other databases.

20. To further enhance academic excellence, college authority should in service training programs within the college on effective use of internet and electronic resources for science teachers and encourage them as well as to attend such programs.

21. Library shall be organized awareness program regarding electronic resources for the users so that users can understand and use electronic resources in teaching, learning and research process.
22. library shall be provided various services to the users as like current electronic information service, content pages, electronic Selective Dimension Information, electronic mail and instant messaging.

23. Majority science teachers are using electronic resources at their home and library only. Wi-Fi and other internet connection facility may be extended to the college campus, office, classroom, playground and computer lab so that science teacher shall the electronic resources from various locations

24. Majority science teachers face various problems regarding electronic resources so library shall provide infrastructural facility, adequate number of user’s terminals, power supply, bandwidth connectivity and other facilities.