The purpose of research is not well served unless the findings are made known to others. This chapter of thesis served this purpose. The research study is helped to draw some important conclusions. These conclusions are made on the basis of information collected from the directors/faculties/non teaching staff/students and mainly from data collected from questionnaire-based survey. The present study has provided a preliminary analysis of Green ICT awareness and implementation based on a survey of 903 respondents of category directors, faculties, staff and students who are academic IT professionals of the selected professional institutes in Pune district. Some of the important findings or conclusions with regard to different aspects are as follows:

1. **Use of ICT:**

The study has revealed that almost all professional institutes are using Information and Communication Technology to carry out institute activities like Administrative, Teaching & Learning, Library and Research. It is identified that ICT has become vital integral part of selected professional institutes in Pune district.

2. **Environmental Impact of ICT:**

The study found that there is presence of local and global impacts of ICT on environment. Also at the same time ICT equipment’s energy consumptions, carbon dioxide emissions and hazardous material from IT equipments are becoming major concerns among majority of academic professionals in Pune district. Some of the important revealed impacts of ICT affecting the human health and environment are described as follow:
a) ICT uses a lot of electrical energy and it is rising fast.

b) ICT responsible for carbon dioxide (CO2) emissions.

c) Climate Change and Increased Temperature are global effects of ICT.

d) ICT generates hazardous e-waste.

e) ICT responsible for Land and Water Pollution.

f) ICT not only affect human health but spreads diseases.

It is observed that there are significant numbers of directors of professional institutes who are not aware that ICT is responsible for land and water pollution too. This concludes that there is need to improve the awareness of environmental impacts of ICT if it is not effectively applied.

3. **Need and Importance of Green ICT:**

From the analysis of the Directors/Dean, Faculty and Students of almost all selected professional institutes, it is validated that there is pressing need to reduce the carbon emissions, use energy efficient methods and manage the resources intelligently and efficiently for future sustainability of ICT. The study found the need of Green ICT implementation based on three significant reasons namely the social, economic and environmental demands of green ICT. It is discovered that maximum number of professional institution’s Director’s/Faculty/Staff/Student places a high priority on environmental sustainability and they are actively engaged in minimizing electrical energy consumption. This shows that Green ICT implementation is only the solution to
achieve future sustainability of ICT. All the directors of the professional institutes opined that Green ICT implementation has become key factor to achieve cost effective solutions as well as for sustenance of ICT in future. It is also revealed that the issue of Green ICT is very important in upcoming years.

4. **Green ICT Awareness:**

The study indentified that the awareness of green practices and initiatives among directors and faculties is significantly more as compare to Green ICT awareness among the students of professional institutes. The research is confirmed that, Green ICT awareness is independent of the training provided by the institutes according to the director’s perspective. But at the same time, the research found that the Green ICT awareness of faculty and students is depending on the training provided by the institute. It indicates that the professional institutes need to organize green awareness training programmes to improve the knowledge pertaining to Green ICT practices and benefits.

5. **Institutes G-readiness:**

The study assessed the institutes G-readiness to implement Green ICT as per research objective. It is evident that agreed respondents on G-readiness of institute is significantly more than those disagreed on the same. The professional institutes which behaved in an eco friendly manner are the assets to the district and the world as a whole and should be promoted to become change leaders for others to motivate for Green readiness. The implication is that if professional institutes are highly concerned with environmental problems and G-readiness then they are more likely to behave green. It is found that all professional institutes showed green readiness to adopt green practices to save planet.
6. **Green ICT Practices:**

By implementing Green ICT, professional institutes ultimately ensure the sustainability of the IT resources. The study investigated the ways in which educational institutes of Pune is reducing, reusing and recycling IT infrastructure. The green ICT practices like ‘End User PC Power Management’, ‘Purchasing Energy Star/EPEAT Rating hardware’, ‘Reducing energy consumption by powering down of ICT devices’, ‘Use of Recycled paper’ and ‘Reducing paper and consumable usage’ are robustly followed by most of the professional institutes in Pune. Nevertheless the GICT practices like ‘Use of Thin Client Model’ and ‘Reuse and Refurbish Policy’ are weakly followed by few professional institutes as per the opinion of directors. It is also observed that the some green ICT practices like ‘Established Green ICT Committee’ and ‘Implementing Green ICT Policy’ are not sincerely deliberated by much more professional institutes in Pune. However, the green practice of use of renewable energy sources like solar has initiated by much more number of professional institutes in Pune. It is concluded that the green practice of ‘End User PC Power Management’ is the most popular practice among almost all directors, faculty and students of professional institutes in Pune which implies that all stakeholders are motivated towards energy conservation.

7. **Critical Success Factors of Green ICT:**

The study not only discovered factors for successful implementation of GICT but also scrutinized the critical ranking of these factors. Green ICT implementation cheers and sustains greener activities by the directors, faculties, staff members and students of professional institutes.
Apart from GICT practice, the research study is identified most critical factor affecting the success of Green ICT implementation which is none other than ‘Energy Conservation’. The second most critical factor of GICT implementation as per the director’s views is ‘Cost Reduction’ but ‘Corporate Social Responsibility’ according to faculty. This implies the differences in the thinking or opinions of director category of respondents and faculty respondents of professional institutes. The success factors of GICT implementation are analyzed on the basis of questionnaire filled in by the directors of professional institutes which are listed below in an order of the critical ranks:

I. Energy Conservation
II. Cost Reduction
III. ICT Carbon Emissions
IV. Institutional Own Policy
V. Optimum Utilization of Resources
VI. Corporate Social Responsibility
VII. Hazardous material from ICT equipments
VIII. Government Legislation
IX. Stakeholder’s Demands
8. **Benefits of going green:**

The research confirms that Green concept of ICT implementation is for sustenance of ICT and environment in future based on the responses of professional institute’s stakeholders. With the increasing awareness of environmental issues around the world, most of institutes are turned to green ICT initiatives. The study showed that there are not only significant environmental benefits to these initiatives, but also they also yield substantial cost effective benefits. Some of the benefits obtained by the professional institute as a part of Green ICT implementation are as follows:

a) **Minimize carbon footprint and hazardous e-waste:**

The study found that the good number of institutes is reducing ICT wastes by recycling IT equipment which ultimately expands the lifespan of ICT equipment. As a result of following this green practice most of institutions are benefited in terms of minimize carbon footprint and hazardous e-waste.

b) **Environment Sustainability:**

The study discovered that majority of institutes are following green practice of powering down of ICT devices, complying with the regulatory standards for ICT procurement procedures and reducing hazardous ICT waste. Thus protecting mother earth from land and water pollution and achieved environment sustainability as a benefit of green practices according to the opinion of almost all directors, faculties, staff members and students of selected professional institutes.
c) **Reduce energy cost:**

The majority of directors, faculties and administrative staff of selected professional institutes are in agreement with the benefit of reduced energy cost as a result of Green ICT implementation and by optimum utilization of resources. However, very few students are disagreed with this benefit.

d) **Compliance with Institutional own Policy and Legal Regulations:**

The study indentified that the some professional institutes comply with the government laws, protocols for sustainability and also its own policy by way of reducing e-waste, recycling of ICT equipments and minimizing electrical energy usage. It implies that there is need of strict government regulation and compliance.

e) **Achieved Corporate social Responsibility:**

All the directors of selected professional institutes are in agreement with the benefit of the attaining corporate social responsibility as outcome of GICT implementation. Now a day’s achieving corporate social responsibility is playing major role in holistic development of nation and also government has made many regulations towards that. The sustenance of ICT leads to the sustenance of earth. The study implies that most academic IT professionals are now concerned about environmental problems and not only teach but also motivates society to follow green practices for protection of world which in turn helps in improving public image in the society.
9. **Barriers of Green ICT:**

The Green ICT as an imperative area is recently started to boom with academic IT professional including administrative people. During the study it has been observed that the few faculties and most of students have not keen to know electricity bill of consumed energy of institute. There are regulations or hardly few audit requirements from government. The study revealed that few faculties, staff and students who are lacking motivation to go green in their approach of using ICT like by reducing print volumes and using conference calls to reduce unnecessary travel. However, some directors are disagreed with lack of motivation among faculties/ staff/ students as barrier of Green ICT. This shows the differences in the opinion among the stakeholders of the institutes. The study validated that the lack of government strict regulation and rational of adopting green policies are the real hurdles in implementation of Green ICT at professional institutes conducting MBA and MCA course in Pune according to all category of respondent. As financial authority lies with the directors of the institute only, it is found that partial directors are agreed with budgetary constraint as barrier of GICT implementation whereas the other partial directors are disagreed with this as a GICT barrier.

10. **Strategic Plan for GICT:**

The directors the backbone of the institute when asked about the status of institute’s strategic or operational plan for Green ICT implementation, it is found that maximum number of directors have initiated strategic planning for GICT.
However some of the directors said that plan is being developed and few directors said that completed plan is part of institutions overall strategic plan. This indicates that there is need to improve the focus on strategic planning for efficient and effective implementation of GICT at professional institutes. The percentage of directors who are not initiated such plan is just negligible.

11. **Energy Audit and Renewable Energy Sources:**

The study identified that there are only few professional institutes which carried out complete energy audit. This implies the awareness and seriousness toward the energy audit. However, from remaining very few professional institutes have initiated planning towards the energy audit and the use of renewable energy sources like Solar, Wind etc for ICT.

Overall, this study leads the researcher to conclude that the Green ICT is for the sustenance of ICT in future and also it is an innovative way of using ICT related to the environment safeguard. From the demographic analysis of the sample data it was established that, Pune directors of professional institutes are most likely to be male belonging to the age group in between 36 to 45 years or above.

The awareness of GICT is very high among the directors; comparatively it is low among students of professional institutes. The students and faculties are highly dependent on the training provided by institute to improve the awareness of GICT whereas the directors GICT awareness is independent of training.
This shows there is a great need to educate students and raise their level of concern about the environmental impacts of ICT that mankind is facing due to not applying ICT efficiently and properly. The passive students need to be converted into green or active concerned students. The institute suffices to ensure that ICT goes green but it requires self governance as well as government imposed rules and regulation. It is believed that the majority of directors playing vital role in motivating all faculty/staff/ students of institute to go green in their approach of using ICT. The most primary critical factor of institutions Green ICT implementation efforts is energy conservation. The highest benefit of GICT implementation is cost saving which is achieved by minimizing the wastage of computational facility, recycling of paper, reducing travel and optimized energy consumption. However, the real barrier for professional institutions GICT implementation is lack of government strict regulation and green policies. Hence it is concluded that all research objectives are fulfilled.

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