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Success Factors for e-Court Implementation at Allahabad High-Court

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Completed Research Paper

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Abstract

This paper is an attempt to study the important factors responsible for successful implementation of Electronic Court (e-Court) at Allahabad High Court India, to examine the effectiveness and efficiency of e-Court at Allahabad High Court and to conduct a feasibility analysis of replication of e-Court in lower courts of India. A qualitative case study approach was adopted comprising in-depth literature review and structured interview to conduct the study. Subsequently, NVivo 11 Pro software is used to analyze the recorded data and to identify the Critical Success Factors (CSFs). The findings of the study identified 23 CSFs for efficient and effective implementation of e-Court at Allahabad High Court. Also, feasibility analysis explored replication of e-Court in lower courts of India is possible after resolving few issues. The outcome will be helpful for efficient and effective implementation of e-Court in various other High Courts and lower courts of India as well as to enhance the effectiveness of process.

Introduction

Current era of globalization and rapid technological development is affecting the overall economies and creating new challenges along with openings for the countries to grow and develop. With all the segments, Courts are also part of this race to meet the challenges and adopt new technologies devoid

of compromising with the economical growth, additionally providing effective and efficient judicial services to the clients. Information and Communication Technologies (ICT) are providing potential IT tools (video conferencing, e-mail, digitalization of record etc.) to the courts to meet the modernization requirements (Supreme Court Agenda, 2009). Indian Government's approach towards "Green Court" concept (eCommittee Newsletter, 2016) and biggest challenge of clearing world's largest backlog of pending cases (newindianexpress, 2012) pushed Indian Supreme Court and lower Courts to implement e-Court. It is estimated that, till April 2016, more than 30 million cases are pending in the Indian courts due to mammoth postponement in disposing of cases and it may take approximate 466 years to dispose of the cases with the current rate of hearings/justice process (Pandey, 2016).

An e-Court is a paperless Court comprising digitalized case files, digital signature, digital orders using dictation software and digital movement/exchange of files. It is the process of transforming the manual procedure of filing, storing records, and conveying information etc. into digital procedure using ICT (Upadhyay, 2015). Indian Government launched e-Court a Mission Mode Project (MMP) under National e-Governance Plan (NeGP) on the basis of "National Policy and Action Plan for Implementation of information and communication technology in the Indian Judiciary – 2005" (ecourts.gov.in, 2016; eCourts Project, 2014; Talukdar, 2012). According to Department of Justice Ministry of Law & Justice Government of India Report (2011), Indian Government approved the e-Court MMP Project- digitalization of Supreme Court, 21 High courts and approximates 15,000 Lower Courts in the nation and up-gradation of IT infrastructure.

According to Tabrez Ahmad (2009) e-Court is a glimmer and one of the solutions opted by the Indian Government in the context of concerned issues. The application will be helpful in two contexts: first is to reduce/replace paper-based work system, a contribution to green environment and second is to speed-up enormously the judiciary processes and to provide national centric services delivery, automated case management and transparency. Also the project will be helpful to improve transparency, accountability & cost-effectiveness for a litigant. However, according to ICT Trends in India 2009 (Dalal, 2009) and other current reports/news, still there is no single e-Court in India in spite of contrary media reports.

The studies show that e-Court is an innovative initiative of e-Government and, the MMP is very useful in all aspect of Indian culture and societal requirement. On the other hand, it is also revealed that e-Court is not successfully implemented in India yet. Consequently, this reveals a gap existence between government initiative, strategies and acceptance by the judicial staffs, clients and other related members. Also, from the available literature review it is apparently that very little literature is available on the CSF for e-Court implementation especially in Indian context.

This research paper is an attempt to identify the success factors influencing successful effective and efficient implementation of e-Courts in India with special reference to Allahabad High Courts in Uttar Pradesh. A case study of Allahabad High Court is performed through extensive literature review and structured interview. Using NVivo 11 Pro software 23 success factors were recognized and validated namely: Awareness of e-Court, Stakeholders' Training, Techno-Legal Expertise, e-Court Policy, Technology, Infrastructure, Up-gradation, Funds, Integrity, Technical-Staff, Authentication, Connectivity, Security, Evidence and Data Storage/Recording System, Cost–Benefit Analysis, Governmental/Judicial Will, Project-Administration, Project-Monitoring, Change Work-Culture, Accountability, Online-Dispute-Resolution concept, Vendor' Monopoly Elimination and Process Reengineering. This study will be helpful for efficient and effective implementation of e-Court in various lower courts of India. Substantial amount of cost and time saving will be there for implementation of e-Court, which will further increase efficient functioning of lower court meeting with green environment objective.

Literature Review

Throughout the world, countries are implementing and operating e-Court initiative on the basis of Green concept by reducing traditional paper based working procedure including Malaysia, which started fully functional e-Court using Video Conferencing System (VCS), Case Management System (CMS), Community and Advocate Portal System (CAPS), and Court Recording and Transcription

System (CRTS) and e-Filling in 2011 (Hassan and Mokhtar, 2011). According to Gibson (2016), the developing technologies have enabled Judges and Courts to interact with public via social media as well as provided a platform to respond to continuously evolving digital communication platform. Also, this platform has provided facilities to litigants to file skepticism in retort to official judgments (eCommitteenewsletter, 2016). UK Government has modernized its Courts and judiciary procedures to improve the judicial process speed, cost effectiveness and quality of service through exploiting the potential of Information and communications Technologies (Raine, 2000). There are little literature is available on benefits gained by implementing e-Court for example easily accessible, transparent, cost saving, improved efficiency and effectiveness of judiciary procedure (McMillan et al., 1998; Nasir, 2007; Talukdar, 2012; Stirah and Haider, 2012; Tipping et al., 2014). There is widening use of innovative technological initiatives .i.e. E-Court to present the evidences (Tipping et al., 2014).

According to Upadhya (2015), the planning and designing of e-Court i.e. e-judiciary was initiated in India since 2003 and the process of computerization of all courts was initiated in 1990. Under NEGP as a Mission Mode Project (MMP), Indian Government has planned to implement e-Court by ICT in three phases over a period of five years: Phase I- installation of Hardware and Software, providing training, appointing technical staff and connectivity; Phase II- facilitating courts with power back up, video conferencing, ICT infrastructure up-gradation, Wi-Fi enabled Supreme Court and High Courts and Digital Signatures (DS); and Phase III- Government Process Reengineering (GPR), Project Management Consultancy, monitoring & change management and centralized facility (Department of Justice Ministry of Law & Justice Government of India Report, 2011).

However, after all these efforts till May 2016, Indian government was struggling to establish the first e-Court of paper due to several reasons like lack of techno-legal expertise, infrastructure etc. (Upadhyay, 2016). Little literature is available on factors affecting successful implementation of E-Courts in India. There are little literature is available on factors responsible for effective implementation and functionality of e-Court. This paper is an attempt fills this gap with special reference to Allahabad High court as well as to conduct a feasibility analysis of replication of e-Court in lower courts of India.

Research Methodology

To conduct the study a qualitative case study approach with the help of following research methodology has been adopted: an in-depth literature review followed by structured interview conducted at the Allahabad High Court and perceptions/comments of respondents were recorded. The recorded/collected data analyzed by using **NVivo 11 Pro software**, in order to provide systematize and order data, facilitating more meticulous and steadfast qualitative research analysis (Andrade, 2009; Ghauri, 2004).

NVivo, created by QSR International, is Qualitative Data Analysis (QDA) computer application software. Using this software the qualitative research becomes more convenient, efficient, effective and more improved in terms of quality as the manual task reduced to a great extent (Siccama, 2008). According to Satriah and Haider (2012), NVivo is very useful in managing the data and categorization of data according to the required/generated themes from the collected information. Further, this software is useful in establishing relationship among various themes emerged from the interviews and represent the cause and effect analysis.

Initially to conduct the study, extensive literature review is conducted and all the relevant articles were summarized and imported to NVivo 11 Pro for further analysis. Afterwards, Five Legal Experts at the Allahabad High Court were interviewed and their interviews were recorded and converted into required format supported by the software. A small sample size is taken for the study, as for the qualitative study a small size (upto 10) sample is adequate for sampling if drawn from a homogenous population (Sandelowski, 1995). The interview covered the question about key factors essential for effective and efficient implementation of e-Court at Allahabad High Court and Lower Courts of India. Additionally, questions about barriers and problem they are facing in implementation of e-Court had been asked. Both the primary and secondary sources imported to the NVivo software so that the coding process could take place. The analysis of data after coding process resulted into 23 success

factors responsible for effective and efficient implementation of E-Court at Allahabad High Court and Lower courts. However, the results are also applicable to the other High courts and Lower courts in the country.

Case Study-Allahabad High Court

The Allahabad High Court (HC), established in 1869 at Allahabad, has the sway over the Uttar Pradesh state and is among the first HCs in India. Further, at present it has total 160 numbers of judges (the highest number of judges) in India. e-Court has been launched in 2005 and being implemented in three phases at the Court (eCommittee Newsletter, 2016).

On 12th March, 2016, Chief Justice Hon'ble Mr. Justice Tirath Singh Thakur has formally inaugurated the Centre for Information Technology (IT) in the Allahabad HC. The building has a Data Centre, Video-Conferencing Halls, to assist the e-Court project (www.allahabadhighcourt.in). The building is well equipped with the internet connectivity equipments and integrated with Allahabad HC in order to successfully implement and operate the e-Court project. In addition to this, servers, scanners, and other associated equipments has been mounted to start the pilot project. The digitization of the files is undergoing in the HCs to save the space and time. Committee comprising Justice Dilip Gupta, Chairperson; Justice Anjani Kumar Mishra and Justice P.K. Srivastava as members is monitoring the e-Courts Projects in India (www.allahabadhighcourt.in).

Coding Analysis

The coding procedure is carried out in the NVivo 11 Pro software from two sources: 1) audio recoded during the structured interview of HCs judicial members as well as 2) the stored relevant and specific literature on e-Court. The nodes titles were created and themes extracted from transcript data and literature review. Subsequently, after identifying the relationship between nodes, similar nodes put into one theme and different nodes in other themes. Once the coding process was completed, data was analyzed and word count and frequency of occurrence were exported from the NVivo software and continued the interrogation of the data generated using the Query Tools in NVivo.

Table 1: Word Count and Frequency

Word	Length	Count	Weighted (%)
Administrators	14	59	0.41
Adopt	5	8	0.27
Applications	12	36	0.39
Authentication	14	51	0.38
Authority	9	9	0.26
Automation	10	4	0.25
Awareness	9	6	0.38
Budget	6	3	0.19
Change	6	38	0.39
Computerization	15	4	0.25
Connectivity	12	87	0.77
Digital	7	2	0.13
District	8	73	0.30
E-filing	7	187	0.49

Electronic	10	183	0.47
Encryption	10	1	0.06
Engineering	11	102	0.78
Equipped	8	1	0.06
Exercise	8	111	0.86
Expenditures	12	1	0.06
Expertise	9	6	0.28
Experts	7	6	0.15
Financial	9	7	0.44
Hardware	8	35	0.43
Implementation	14	76	0.79
Information	11	110	1.29
Infrastructure	14	101	1.06
Installation	12	9	0.40
Integrated	10	77	0.75
Item	4	5	0.17
Judges	6	46	0.41
Judicial	8	94	1.14
Legal	8	94	1.14
Limited	7	3	0.13
Management	10	161	1.61
Manpower	8	4	0.25
Monitoring	10	3	0.19
Online	6	33	0.40
Personnel	9	3	0.19
Place	5	3	0.09
Plan	4	110	0.86
Policy	6	70	0.85
Professionals	13	3	0.19
Records	7	59	0.63
Reengineering	13	1	0.06
Responsibility	14	4	0.25
Secure	6	4	0.09
Software	8	114	1.37
Staff	5	3	0.19
Support	7	126	0.84

System	6	121	1.28
Technology	10	61	0.37
Training	8	187	1.67
Updated	7	3	0.19
Vendors	7	25	1.58

Where in query tool, the finding matches adjusted to – from 'exact' to 'similar' and word display adjusted to '500' for all 23 CSFs individually. All the descriptive, thematic and Analytic codes stored and a hierarchical chart had created to represent the nature of relationship among them. Table 1 shows the maximum occurred word during the interview i.e. used by the interviewees (judicial member at Allahabad HC) and in the relevant literature review with their weighted percentage.
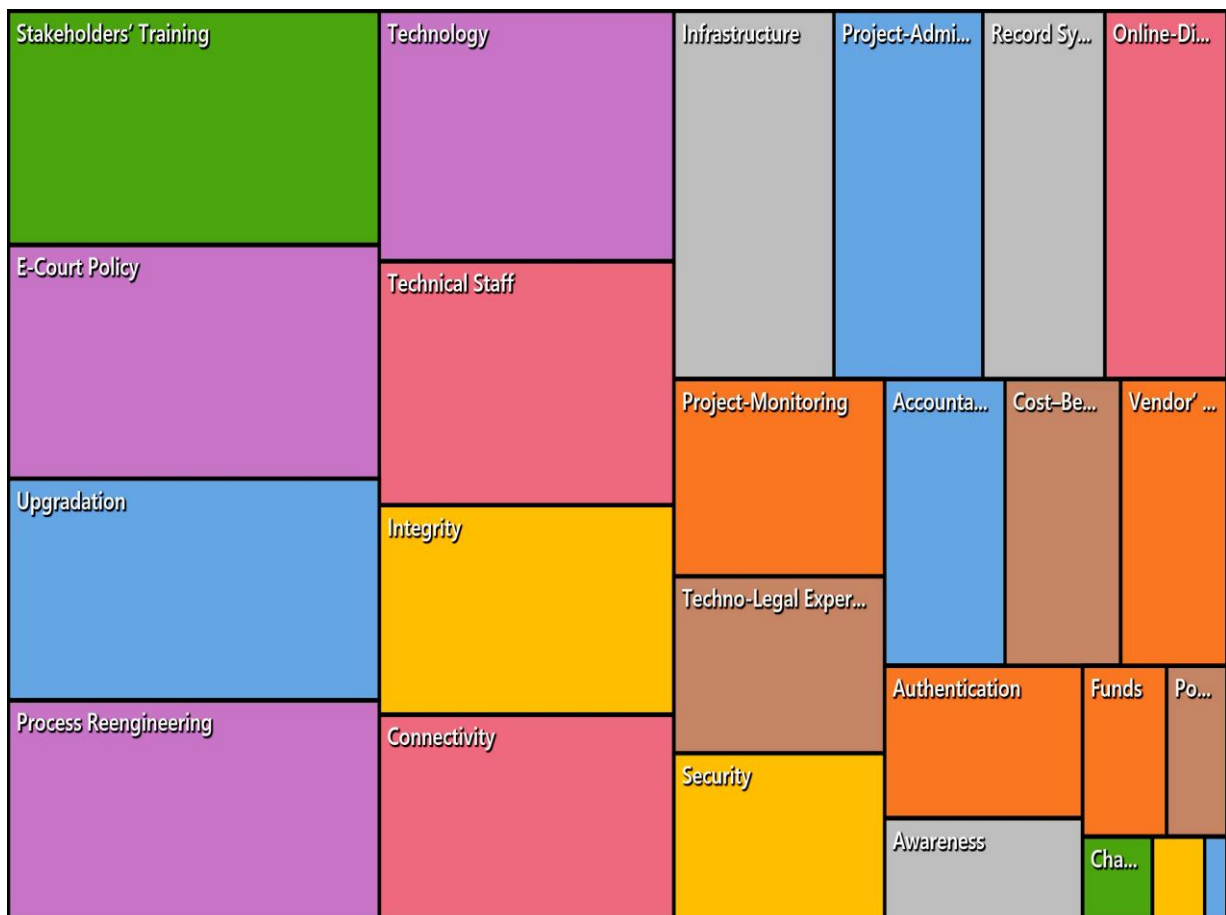

Figure 1: Hierarchy Chart of Nodes

It is depicted from the Table 1 that the terms like Training, eFiling, electronics, information, systems and plan are used most commonly and maximum times. On the other side, few words equipped, encryption, expenditure and monitoring were used very less by the judicial members. This represents that the training, eFiling, information distribution etc. are the major concern for the adoption of e-Court at Allahabad High Court and the Lower Courts.

Figure 1 represents the hierarchy chart of nodes. In Figure 1 the bigger square area represents the maximum number of coding at the node. However, the smaller area covered by the node, shows the smaller number of coding at the node. Figure 2 presents the cluster analysis of codes. It visualizes the patterns of similar words and different words, and coded similarly by different nodes.
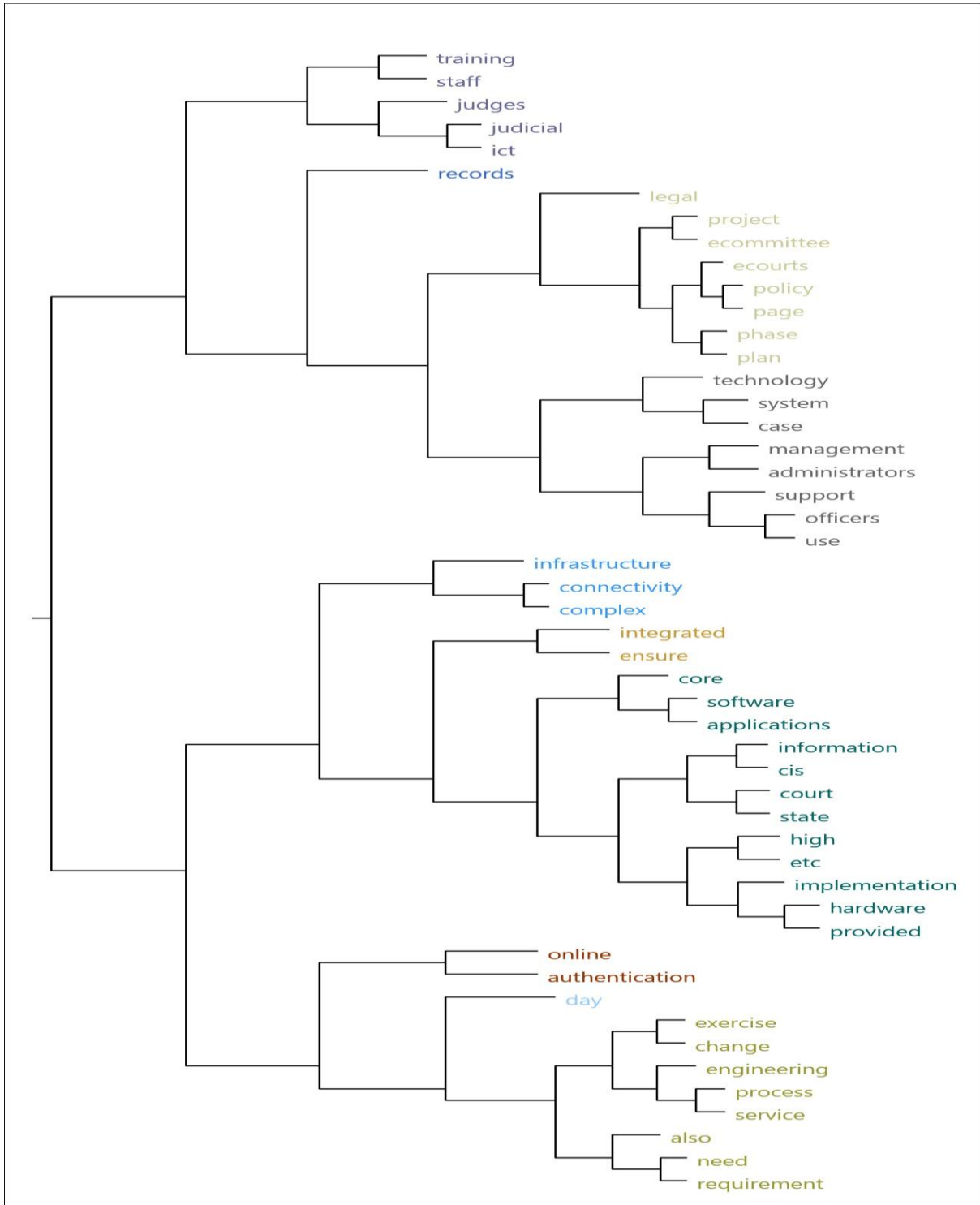
Figure 2: Cluster Analysis of codes

It is clear from the Figure 2 that words like judges, judicial, ICT are in the same group or have the similarity in the project, or coded similarly by different nodes Figure 3 represents the Nodes clustered analysis on the basis of nodes contain the coding. The Nodes are closer to each other, i.e. under the same parent category have the maximum number of similar codes. For example change Work Culture and Process Re-Engineering have the mostly common/similar codes, similarly for Technology and Up-gradation Nodes etc.
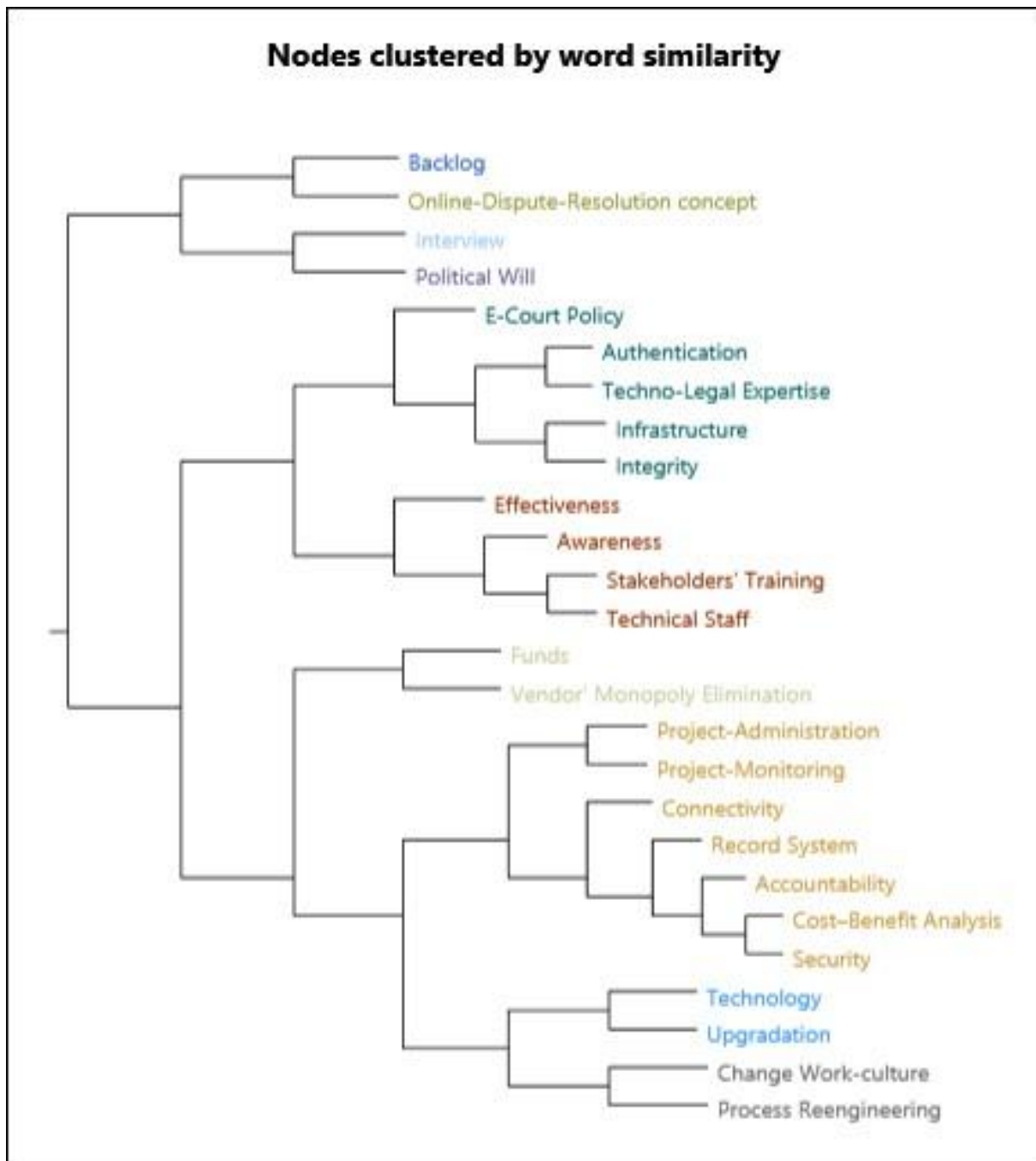
Nodes clustered by word similarity

Figure 3: Nodes Cluster Analysis

Result and Analysis

From the coding and data analysis it is observed that Awareness of e-Court and Stakeholders' Training are the most important factors as this factor will enable the members and litigants to use e-Court conveniently (eCommitteeNewsletter, 2016; Upadhyay, 2015; Sharma, 2015; Ahmad, 2009; Epstein, 2004, McMillan et al., 1998). Additionally, according to the respondents "Awareness of e-Court is key factor. The client as well as the judicial staff must be aware about digitalization of court, which will be helpful to them by speeding up the procedure and by making up the judicial system more transparent". Subsequently Technology (Upadhyay, 2015; Hassan and Mokhtar, 2011; Gilbert and Dabbagh, 2005; Epstein, 2004), Connectivity, Infrastructure (Sharma, 2015; eCommittee, 2014) and Up-gradation (Sharma, 2015; McMillan et al., 1998) are the basic requirement for e-Court implementation, without sufficient infra, innovative technology, and up-gradation of infra the goal of

e-Court project could not be achieved. The respondents replied "In courts the major concern is IT infrastructure, we don't have adequate amount of desktops and UPS, low internet connectivity and other required facilities. And the systems/softwares, we have provided are not upgraded". It is observed that India is dealing with poor computerization, Techno-Legal Expertise, Policies and guidelines, and technical staff, which are the key factors to establish the e-Court in the country (eCommitteeNewsletter, 2016; Upadhyay, 2015; Ahmad, 2009; McMillan et al., 1998). "The digitalization of files is in progress, in order to implement e-Court. However, it is well known that to implement any big decision/innovation, guidelines and feasible strategy is required with Top-to-bottom approach", respondent.

Despite of well defined objective and plan to achieve it, Cost-Benefit Analysis and Funds are required to infuse ICT infrastructure and up-gradation (Sharma, 2015; McMillan et al., 1998). "The internet connection, computers, expert's appointments, system up gradation etc. depends upon funds provided to the courts", respondent. Similarly, as the cybercrime and online threats are increasing, Trust, Security and Authentication are the major concern (eCommitteeNewsletter, 2016; McMillan et al., 1998) for effective and efficient implementation of e-Court. Respondent, "The clients, lawyers and other judicial staff are afraid of digital authentication, data manipulation and other digital crimes." The foremost motive to implement the e-Court is to shift the traditional paper based work process to automatic digital system for environment sustainability. The digital work procedure will also resolve the issue of management of records and files, the next important concern (Upadhyay, 2015; Sharma, 2015; Ahmad, 2009). From the analysis it is revealed that Leaders motivation and support i.e. Governmental/Judicial Will, proper management of project i.e. Project-Administration and regular monitoring of process i.e. Project-monitoring are other key factors for e-Court establishment (eCommitteeNewsletter, 2016; Upadhyay, 2015; Saman and Haider, 2012; McMillan et al., 1998). The adoption of new technology coerce to change the traditional work-culture and Government Process Reengineering (Upadhyay, 2015; Sharma, 2015; McMillan et al., 1998), however, it improves the personnel's responsibility/creditability i.e. Accountability (Upadhyay, 2015; Sharma, 2015; Ahmad, 2009). Respondent, " e-Court implementation will improve the accountability of the staff and judicial officers".

In addition to these factors identification, it is explored from the interview and feasibility analysis that replication of e-Court in Lower Courts of the state is possible. However, the major issues are building and location of Lower Courts in the state, ICT infrastructure, internet connectivity and little digital literacy for e-Court establishment. Above all these issues, the problem of unstable electricity supply in the districts (generally in rural areas) requires measures to solve the issue.

Conclusion and Recommendation

The study is an endeavor to investigate the CSFs for successful implementation of e-Court at Allahabad High Courts. The study explore 23 success factors namely: Awareness of e-Court, Stakeholders' Training, Techno-Legal Expertise, e-Court Policy, Technology, Infrastructure and Up-gradation, Funds, Integrity, Technical-Staff, Authentication, Connectivity, Integrity, Security, Evidence and Data Storage/Recording System, Cost–Benefit Analysis, Governmental/Judicial Will, Project-Administration, Project-Monitoring, Change Work-Culture, Accountability, Online-Dispute-Resolution concept, Vendor' Monopoly Elimination and Process Reengineering for efficient and effective implementation of e-Court at Allahabad High Court. A Case study at Allahabad High Court conducted via structured interview to conduct the study. Using NVivo 11 Pro software recorded data analyzed.

Also, feasibility analysis explored that replication of e-Court in lower courts of India is possible after resolving few issues like power supply, ICT infrastructure etc. This study is limited to only Allahabad High Court; therefore there is scope for the country wide study in different High Courts. The outcome will be helpful for efficient and effective implementation of e-Court in various lower courts of India. Substantial amount of cost and time saving will be there for implementation of e-Court, which will further increase efficient functioning of lower court meeting with green environment objective. It is recommended that infrastructure of Indian e-Courts should be upgraded to fulfill the requirement for

better implementation of e-Court in India. As this MMP is a key to lessen the number of pendency cases in India, it is important to make aware the lawyers, judicial and litigants via awareness campaigns.

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