

## A Novel Approach to Analyze Behavior of Social Media User Using Business Process Re-Engineering

*Vivek Shukla<sup>1\*</sup>, Rohit Miri<sup>2</sup>, S.R.Tandan<sup>3</sup>*

<sup>1,2,3</sup>Department of Computer Science and Engineering, Dr. C. V. Raman University, Bilaspur  
Chhattisgarh, INDIA

*\*Author for Correspondence*

### Abstract

Today, the structure and behavior of the organizations have to be considered to help adaptation and evolution in a dynamic and more rapidly changing in the environment. Business process re-engineering is the representation of a center-business method of measuring designed to improve product returns, quality, or decreasing expenditures. It usually involves investigate organizational processes, finding inferior or wasteful measures, and identifying techniques to disposing or changing them. As of late online media has gotten universal and essential for social systems administration and substance sharing. BPR is defined as “a fundamental rethinking and radical redesign of business processes to achieve substantial improvements in all performance metrics such as cost, speed, quality, and service.” Each of private and public organizations are either subject to use BPR or looking for an alternative methods which achieve the same results. Although a lot of organizations embraced the concept of BPR programs, only a few of them success, while the other fail with a high failure rate (e.g. 70%). Online media have reached a step in which its impact is believed by larger connections nowadays. The organizations have had a vital role to play in rethinking their current economic initiatives and planning new business cycles in globalized marketplaces. Our paper discusses topics such as how web-based media shape market cycles and why they take proactive steps in modern companies. An organization's progress relies on the successful performance of its expected results. These market initiatives are also being contemplated whilst a few aspects are being prepared. The internet media promotes a mixture of individuals from separate places to exchange substances, which acts as an essential and critical feature in the characterization of market measures. Business measures through online media are a unique pattern for the present organizations. As web-based media, a rich pool of data through the successful use of modern systems is created. Businesses will profit immensely from online media and this analysis region is also limited by the field of information technology. Our paper is a little focused on the research carried out in the province.

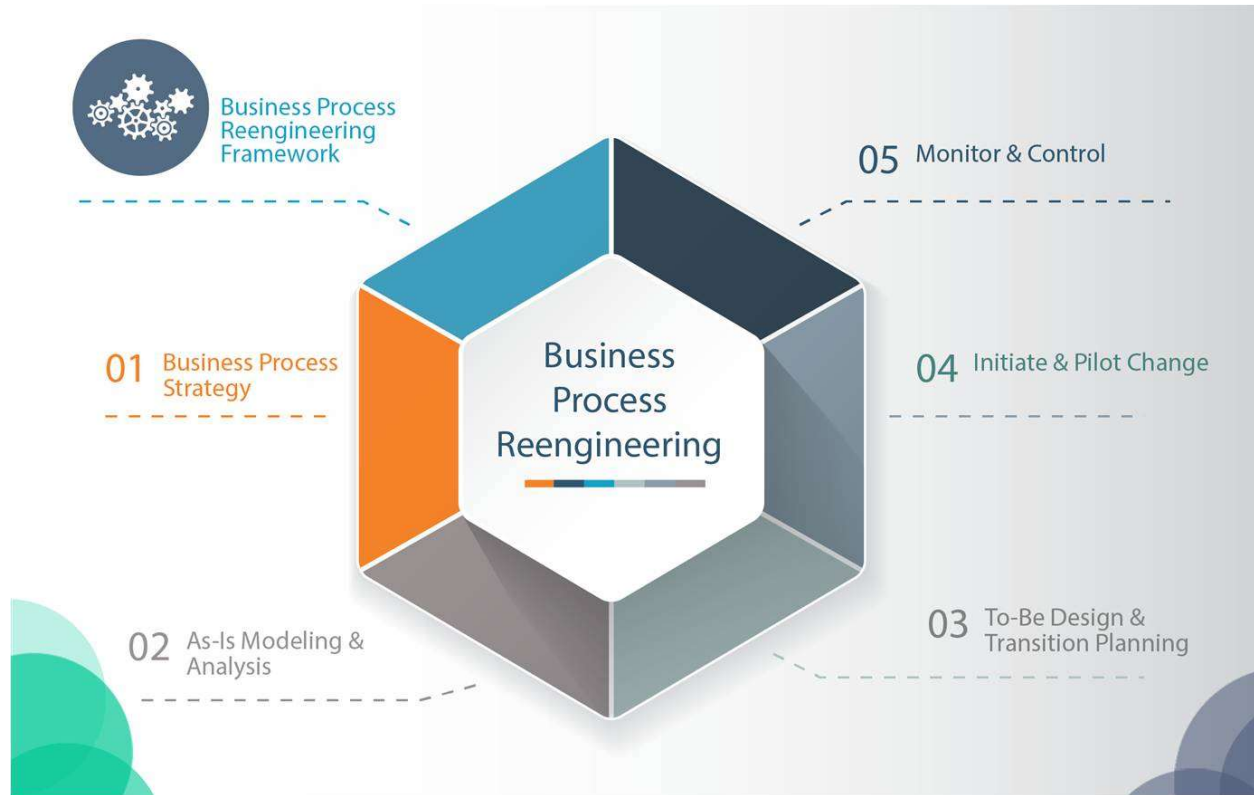
**Keywords:** Blogging, Business processes, Facebook, MySpace, Podcasting, Social media, Twitter, YouTube, and Wikipedia.

### 1. Introduction

Business Process Management (BPM) is the discipline that combines knowledge from information technology and knowledge from management sciences and applies this to operational business processes [1, 2]. It has received considerable attention in recent years due to its potential for significantly increasing productivity and saving costs. Moreover, today there is an abundance of BPM systems. These systems are generic

software systems that are driven by explicit process designs to enact and manage operational business processes [3].

In the 1990s, most of it decided to start when Michael Hammer, father of reengineering, made available in the Harvard Business Survey the article "The work of reengineering: not mechanizing, not demolishing." The improved results in the paper were spectacular to certain organizations, which in 1994 became a pattern [1]. For example, "Portage cuts creditor liabilities by 75%," "Effective Opportunity Life enhances the degree of protection ensuring skill by 40%" [2]," "There is a change in Xerox' demand satisfaction and administrative requirements by 75% to 97% and the processing time of \$ 500 million;" Innovation, and the mindset during the evolution of the board were essentially sensitive to the Board cognitive ability. BPR now rejects the entire corporate interconnection to create entirely new phases by description. Concepts are easier and faster but functionally the equivalent is an alternative enterprise. On the other hand, with the developments in definitions, studies seem to be joining the developed model for corporate rehabilitation[3]. The fact that existing associations are experiencing serious difficulties in adjusting their management to the unending changes in technology, assorted variety, and general conditions, means something significant about these concepts. The existence of the administrations that they provide[5] is obligatory to stay firmly in view. Also, at this point, organizations are not willing to adapt to their users with traditional administrative modules. Besides, customers, conflict, and start changing have triggered them to experience extraordinary climatic conditions where mass efficacy and the natural world of short-term administrations are essential[4]. Organizations cannot rely exclusively on IT to satisfy such desires to achieve the objectives of the association, as they must also evaluate their center cycles to achieve the necessary developments. BPR's fundamental foundation lies in improving initiatives, especially the measure that supports the organization's corporate assessment, and IT is used as a simple instrument that contributes to computerizations[6]. Figure.1 shows the Business Process Reengineering Cycle.As a result, with BPR, associations can break down the main business cycles and structure, sometimes reorganize them intending to be able to adapt to further revision.



**Figure.1 Business Process Reengineering Cycle.**

**2. Business Process Reengineering Steps**

**Table.1. shows the Success & Failure of BPR.**

STEPS	For BPR Success	Risk failure of BPR
1.	Authenticity and information exchange of change is needed.	The business does not buy-in.
2.	Brought a group of specialists together.	Not connecting the correct individuals.
3.	Locate waste and inefficiencies and define the key indicators of performance (KPI).	Lack of ability to observe analyzed the determinants.
4.	Reengineer the Processes and Compare KPIs	Future prospective alternatives are attributing.

**Table.1.Success & Failure of BPR.**

### 2.1.The Six Key Steps of Business Process Reengineering.



**Figure.2. Key Steps of Business Process Reengineering.**

### 3. Background

Tim O'Reilly (2005) created Web 2.0 as it comprises of online exercises. The client can contribute and can make content. Models: Wikipedia Online promotions, and Online journals. With the appearance of online media and Web 2.0, the business world is investigating new conceivable ways for drawing in with the current and expected clients. Via internet media, e-organizations will gather a great many useful knowledge that is available. (O'Reilly, T, 2005) Internet media was generally aligned fairly with informal cultures. Through the advancement of technology and computerized media use (Morrison and Cheong 2008), developers are looking for better forms of keeping a grip on consumers. Various investigations bring up an increment in informal organization use (Goldsborough, 2009). Even when young people aged 25 to 34 were mostly the consumers of informal organizations and middle-class experts to use them (Kim, 2008). Compared to an eMarketer post regarding informal networking activities in the United States, various groups utilize Facebook and regional organizations. 29% of long-range informal contact devices for tracking or building their profile, 14% of organization heads were on Twitter, and 13% had corporate documents posted on YouTube; (Delloite, 2009) 31% of organizational heads were on Facebook. These findings illustrate a portion of the modern direction that companies are willing to use web media stages to encourage and restrict resources beyond conventional internet marketing. Each decided endeavor addresses organizations' craving and enthusiasm to acquire mindfulness, yet additionally associates with buyers on a more profound, closer-to-home affecting degree. Contemplating web-based media is a critical way since purchasers communicate with these stages uniquely in contrast to conventional media. Web-based media involves an innate move of the promotion company to the buyer, where customers decide which material they should dismiss and which they should give to other people. Many recognize the sharing of the online substance to be growing and changing. The study conducted by Nielson Co. in 2008 revealed that 78 percent of clients are intended to be reliable on the

evaluation of their partners instead of advertising or other sources of data. Moreover, it found that organizations that are not prepared to report customers' voices or evaluations about having lost their customers and also about their possible options. These are our cases' approvals through online advertising:

#### **4. Statement of problem**

An organization that can simultaneously provide and provides more service than individuals can be a partnership with people, consumers or scientists or loan specialists, etc. We may distort the benefits of web-based media from the widespread use and advancement of internet media, where it is a usual clarity point for several citizens. As can be seen, by the estimated number of consumers offered by online media destinations, there is an immense increase for the organization across online media locations such as Facebook, YouTube, Twitter, Wikipedia. We cannot ignore the role of internet media during business contacts in a broad wide range of information advances, in which electronic media have been continuously met with significant needs and an important aspect of existence. In our theory, we would illustrate the meaning of new media for today's market trends and why it affects business.

##### **4.1.The motivation behind the investigation**

The motive behind the research is to demonstrate how available new media importantly and distinctively, influence the market practices presently used by organizations. • The simple explanation of the justification for the researchers. • Integration of reasoning methods.

##### **Exploration questions**

The exploration addresses that we will address in our theory are:

1. What online media means for business measures in modern associations?
2. Why online media influence business measures in modern associations?

##### **4.2.Target gathering.**

Our project aims to collect persons who plan business actions that affect individuals directly. This also means everyone who uses Online media and companies who just like to improve their company through web-based media like Facebook, Twitter, etc.

#### **1. How does MySpace work with companies:**

Millions are wired to the internet. A large majority of people build websites like MySpace every day with journals and websites. This MySpace allows users to build and exchange communities. People in these groups connect and exchange ideas and expertise about the goods. MySpace is a platform that enables users to build portals, upload images, songs, articles, forums, and messages, etc. (Techradar, 2008). MySpace facilitates the handling of client relations. It paves the way for companies to connect with their clients. They will post product details and collect

input on goods and services and improve consumer connections. Also, MySpace helps people to gather details and to determine their attributes and desires. (Techradar, 2008) To sell their goods further, they may even estimate potential sales of their commodity in line with their wishes. Businesses who choose to use MySpace for their business would work on these issues. Next, one of the main activities is to identify the organization's values accurately. (Techradar 2008) To allow them to build portals that define their company and show precisely how their goods overweight the others. This is critical to have a competitive advantage over other goods. During portal growth, many factors are deemed desirable as you browse the website, so that it becomes more popular.

## **2. Facebook:**

Any company's main priority is to create a large consumer base and sell its goods and benefit from it. Here, we can easily see that the user model and the business platform are two key bases. (All Facebook, 2013) If you want to thrive in business, the distance between these groups needs to be effectively bridged. So social networking is the perfect example to fill this divide which will serve as a business tool. Through using social networking in the company effectively, companies or associations will draw millions of internet visitors who will be potential consumers potentially. (Search Engine Nation, 2013)

What are the forms in which the company profits from Facebook?

- Create a profile:**
- Contacting Customers:**
- Communication:**
- Update Your Status:**
- Create a Group:**
- Advertising on Facebook:**
- Polls:**
- Facebook and business model:**

## **3. What should Skype offer business?**

Skype has been one of the world's most prevalent voice multimedia applications. Through utilizing the app and the data saved on the server, Skype facilitates voice contact through the Internet. And it brings users together to connect and submit messages through online conferences. And we can use Skype via cloud storage, which helps companies to work online without downloading the apps, like most programs maintained through cloud computing. Advanced industries should look at Skype as a cloud computing platform. Many systems for

consumer relationship management (CRMs) introduce services through the Internet delivering services such as Skype and the dosage of Skype. Similarly, Skype puts too little emphasis on where the production takes place, nor does the corporate environment. At a large point, this is the final product. By Skype, we were able to interact easily, precisely, and at low cost, making it a powerful tool. Accessing web-based computing applications will improve cloud technology to the advantage of small and large enterprises.

□ **What does Skype teach companies?**

- Skype is prompt
- Collaboration is Key

#### **4. Podcasting:**

In the world of computing, a variety of applications are being established and podcasting appears to be a more mature IT technology. (Morris, Tee; Tomasi, Chunk, Evo, 2008) General consumers and multinationals also use and popularise it. Moreover, simplified and easy-to-use applications are evaluated to boost the utilization of this robust podcasting technology that is being used in other industries. This innovation already has many traditional fields, such as radio programs, bookcases, tour groups, and places of worship. (Crofts, Ssheri et. Al, 2005) Podcasting is used as an academic subject in e-learning services. (Greeson, M, 2006) This has always been the key method for several corporate organizations for their ventures. The reviewers are provided with the fundamentals of this technology from the phylogeny of publication and subscription to podcasts. Current and anticipated increasing principles are also presented in this technology. Tomasi, Chunk, Terra, Evo, 2008. (Morris, Tee)

##### **12.1. Podcasting present and future uses:**

Since 2004, the popularity of podcasting has been enhanced. In February 2006, e-marketer (2006) stated that by the end of this decade there would be 25 to 50 million viewers. Initially, this technology was mostly seen in radio programs. At their ease, the viewer will download and watch their favorite programs. This encouraged young people to produce their news programs because they would need a laptop, a microphone, and software. The application of this equipment in galleries and as a tourist guide allows their work very exciting. Tourists can see the areas when referring to recordings. Electronic media run here to guide travelers in their language and voice. Resources such as the BBC bedtime book are very important to audiences. Individuals with vision disorders and other visual problems should be left to read the largest sales novels of this innovation. Podcasting is now available as a video (Morris, Tee; Tomasi, Chunk, Terra, Evo, 2008). The user includes both audio and video interfaces. So many industries choose this technology to market their items. It is often seen as a method for elections to draw new people, graduates, and professionals. (Ssheri et. Al, 2005). This was used by the Scottish National Party in its campaign. This may only be achieved if the viewer subscribes. They are broadcast before the famous shows and the viewer can get to know them. Tomasi, Chunk, Terra, Evo, 2008.).

## 5. Questionnaire presentation:

And those are the responses we find during our engagement with students who use the services via social media. Table.2 shows the Questionnaire presentation from students.

**Table.2. Questionnaire presentation from students.**

S.no	Questions	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Student 7
1.	Are you happy with the organization's operational contact equipment?	No	Yes	No	Yes	Yes	No	Yes
2.	Facebook, Twitter, YouTube. In turn, makes the company connect too much?	Facebook	Twitter	YouTube	Facebook	YouTube	Twitter	Facebook
3.	How does Facebook enable you to communicate?	It helps to address public affairs with other representatives of the company.	It allows me to touch my fellow students and professors.	It allows me to express my thoughts by putting them on the board of the institution.	It helps to invite peoples to an event through the event calendar.	It allows me to touch my fellow students and professors.	It helps to publish my views through posting on the organization page wall.	It allows users to view photos and videos of activities that take place in an organization.
4.	How does Twitter support you communicate?	It allows the organization and the new strategies to be implemented.	It aims to understand a tweet via the organization of activities.	It allows tweeting the tweet by the business.	It helps to follow the organization and its current plans.	It helps to reply to a tweet by organizing events.	It tries to determine a specific Twitter list of organizations.	It includes describing my tweets for participants.
5.	How can you communicate with YouTube?	The YouTube subscription organization website allows you to follow your videos daily.	It allows watching videos linked to the organization.	It allows report on the feature of an organization on your YouTube videos	The YouTube page subscribe company allows you to periodically follow your posts.	Support to get YouTube participant association profile from the YouTube favorite channels.	Organized network the company as well as other associated videos via YouTube.	Aims to understand the latest corporate events through recordings.



This is the survey submitted to the individual Table.3. shows the delivering the service via social media. (IT Assistance).

**Table.3. Delivering the service via social media.**

S.no	Questions	Yes	No	Comments
1.	What are possible proposals for further interaction? Educators?	N/A	N/A	Via using LinkedIn, blogs
2.	Have you prepared smarter intractability now via Facebook/Witter/YouTube?	Yes		Create admins for students' Facebook page
3.	Users are preparing Company growth by Is it social media?	Yes		
4.	Facebook/YouTube/Twitter. What's better for? Contact with Owners of the company, Students?	N/A	N/A	We honestly consider that Facebook interacts better since it's more comparable to Twitter and other citizens' YouTube Facebook features such as updates and images share.
5.	Do you like social? Media allows connecting with executives of the company quicker than someone else way?	Yes		Both people can use social media quickly Our social networking links aid presently. Expressing and releasing our companies and even allows us to meet our company stakeholders more quickly with this post this message.
6.	Are you using the? Processes like company Recruitment by way of Yahoo, Twitter, and so on?	Yes		We have the recruiting details method and number of selected students accessible in the company and we invite you to apply your details Organization returns, familiar selected Candidates. Applicants.
7.	Can you believe social networking is? Secure for your business And activities?	Yes		Social networking provides several monitoring features Avoid risks from cyberattacks of some sort users. So, we feel confident about utilizing social media Our organization's networking Greater path.

The new hypotheses were developed and implemented to accomplish the objective and to solve the issue of this review.

Firstly, the immediate impact of reengineering and operational success drivers in the company method in H1.H1 includes the following five sub-hypotheses.

**H1.1:** Shift capability affects corporate results ( ( $\alpha \leq 0.05$ ).

**H1.2:** BPR approach selection has an impact on corporate results ( ( $\alpha \leq 0.05$ ).

**H1.3:** Corporate culture has a significant impact on the corporate success ( ( $\alpha \leq 0.05$ ).

**H1.4:** The BPR strategy implementation impacts corporate performance ( $\alpha \leq 0.05$ ).

**H1.5:** Organizational culture assistance impacts operational efficiency ( $\alpha \leq 0.05$ ).

Secondly, the immediate results in H2 of reengineering and ICT in the market phase. H2 thus includes the following five sub-hypotheses:

**H2.1:** Shift capacity has an impact on ICT ( $\alpha \leq 0.05$ ).

**H2.2:** The choice of the BPR approach has an impact on ICT ( $\alpha \leq 0.05$ ).

**H2.3:** Organizational Behavior influences ICT ( $\alpha \leq 0.05$ ).

**H2.4:** Strategic integration of BPR has an impact on ICT ( $\alpha \leq 0.05$ ).

**H2.5:** Organizational culture assistance has an impact on ICT at ( $\alpha \leq 0.05$ ).

Thirdly, the specific results in the H3 of (ICT) and organization's effectiveness:

**H3.1:** ICT has an impact on the success of organizations ( $\alpha \leq 0.05$ ).

Finally: implicit effect on organizational success among BPR (ICT). H4 thus includes the following five sub-hypotheses:

**H4.1:** ICT has a support function between changeability and business effectiveness at ( $\alpha \leq 0.05$ ).

**H4.2:** ICT has a negotiating function between BPR technique collection and business effectiveness ( $\alpha \leq 0.05$ ).

**H4.3:** Function of ICT intervention among corporate structure and results ( $\alpha \leq 0.05$ ).

**H4.4:** ICT has a mediating function among BPR and business effectiveness ( $\alpha \leq 0.05$ ).

**H4.5:** ICT has a function in cooperation among organizational culture help and business effectiveness ( $\alpha \leq 0.05$ ).

### **13.1. Data Analysis and Result**

#### *13.1.1 The Study Sample*

We also found Talent Sprint to be a case study to demonstrate the utility of integrating the principle of resources on Facebook, Twitter, and YouTube. We also prepared a range of questionnaires that offer users' ideas and views on this functionality in the Talent Sprint company and the management on how their social network needs are met. As we mentioned before, we will perform interviews with the individual who helps the IT organization Talent Sprint, with the help of questionnaires and with a variety of interviews with the students who utilize these resources. These organizations issued a total of (100) questionnaires. Max (82) answers were returned to the questionnaire and (64) were considered to be correct for review after the checking of the retrieved questionnaires. This sample is deemed appropriate for study since according to Sikaran, U, it is about (30-500). (2006).

#### *13.2 Results of Demographic Data*

The numerical findings indicate that of 100, 52 were male and 48 were female respondents. Moreover, the highest age category (50 respondents) was 30- under 35. The smallest (10) category was under the age of 25. In comparison, organizational management was the main category of management levels (96 people surveyed). Middle management was the lower party (13 respondents). The highest seasoned category (58 respondents) reported that they had 10- fewer than 15 years of experience. Finally, the smallest category of seasoned individuals (3 respondents) reported that they had fewer than 5 years of experience. These demographic details are detailed in Table 4 below.

Description	Variable	Result	Percentage
Gender	Male	52	52%
	Female	48	48%
Age	Less than 25 years	22	22%
	Less than 30 years	24	24%
	Less than 35 years	34	34%
	More than 35 years	20	20%
Education level	Bachelors	55	55%
	Masters	35	35%
	Doctorate	20	20%
Years of experience in using social media.	Less than 2 years	40	40%
	Less than 5 years	50	50%
	Less than 10 years	10	10%
Total	100	100	100

*Table .4. Source:internet data, for illustration purposes only*

### 13.Conclusion

In this paper,we tried to uncover all successful forms of spreading information to Skill Sprint companies easily and efficiently. The concept of social media-based e-commercial platform will much more transparent and economical to the users. The idea of business by social networking is

a new phenomenon that is entirely credible in the early stages of its growth. We have shown how much market and marketing is effectively accomplished by using the latest application to support their business processes. We demonstrated that in a case-study that is considered in the appraisal of organizations' business processes. Social networking facilitates content exchange about courses, themes, etc. Attracting complete customers without wasteful procedures such as ads and studies, customer ties, corporate goods promotion, the best weapon for membership of the public, important inputs, and communication with citizens from diverse backgrounds. Corporate societies and businesses utilized social networking as a powerful means of contact for traditional marketing practices. The business utilizes social networking, such as Skill Sprint, after evaluating industry procedures. We knew and why social networking affects business processes in real-time.

## 12. Future Work:

In the upcoming technological advancement company may adopt the to use the concept of social networking in its business processes to provide training, customer support, marketing, the gathering of feedback. We also presume that the social network can be used as a fully integrated tool for marketing and managing multiple business processes. This is clear by introducing a social networking idea to businesses like Microsoft, educational institutions like Ability Sprint and JNTU, airlines such as Lufthansa, etc. This can be noticed. We expect the industry to be incorporated efficiently across the social networking concept through all types of companies, from small to large corporations.

## 6. References

1. Graham, I. and R. Williams, The use of management texts: Hammer's reengineering. *Scandinavian Journal of Management*, 2005. 21(2): p. 159-175.
2. Hammer, M., Reengineering Work: Don't Automate, Obliterate. *Harvard Business Review*, 1990. 68(4): p. 104-112.
3. Grover, V. and M.K. Malhotra, Business process reengineering: A tutorial on the concept, evolution, method, technology, and application. *Journal of Operations Management*, 1997. 15(3): p. 193-213.
4. Smith, H., P-TRIZ in the History of Business Process. 2006, BPTrends.
5. Miao, Y.-j., How Does the Enterprise Implement Business Process Reengineering Management, in *E-Business and E-Government (ICEE)*, 2010 International Conference on. 2010. p. 4100-4102.
6. Hammer, M. and J. Champy Reengineering the corporation: A manifesto for business revolution. *Business Horizons*, 1993. 36(5): p. 90-91.
7. M. HAMMER, J. CHAMPY, Re-engineering the Corporation; A Manifesto for Business Revolution, Harper Business, New York, 1993.
8. MORRIS, TEE; TOMASI, CHUNK, TERRA, EVO (2008) "Podcasting for Dummies," 2nd edition. New York: For Dummies/Wiley.

9. NEW FACEBOOK (2013) <http://www.new.facebook.com/press/info.php?statistics> [ACCESSED 2013].
10. CHEONG, H. & MORRISON, M. (2008). Consumers' Reliance on Product Information and Recommendations Found in UGC. *Journal of Interactive Advertising*, 8(2), 1-29.
11. CHISNALL, P. M. 1981. *Marketing research: analysis and measurement*, McGraw-Hill London.
12. COOPER, D. R., SCHINDLER, P. S. & SUN, J. 1998. *Business research methods*, Irwin/McGraw-Hill Burr Ridge, IL.
13. NEUMAN, W. L. 2003. *Social research methods: Qualitative and quantitative approaches*, Allyn and Bacon.
14. OATES, B. J. 2006. *Researching information systems and computing*, Sage Publications Ltd.
15. O'REILLY, T. (2005). *What is Web 2.0?* Retrieved on April 6, 2010, from <http://oreilly.com/lpt/a/6228>
16. PATTON, M. Q. 2002. *Qualitative research and evaluation methods*, Sage Publications, Inc.
17. PORTER, S. R., & WHITCOMB, M. E. (2003). The impact of contact type on Web survey response rates. *Public Opinion Quarterly*, 67, 579–588.
18. RICOEUR, P. 2004. *The conflict of interpretations: Essays in hermeneutics*, Continuum Intl Pub Group.
19. RJMetrics (2010) <http://www.rjmetrics.com> (accessed July 20, 2013).
20. SALEEM, MUHAMMAD(2006) Interview by Tony Hung, "Insights from an Elite bookmarker," Blogger Talks, [http://www.bloggertalks.com/2013/06/muhammad -Saleem -insights-from-an-elite-social-bookmarker/](http://www.bloggertalks.com/2013/06/muhammad-Saleem-insights-from-an-elite-social-bookmarker/)
21. SCHNOFELD, ERIC (2009) "Twitter surges past Digg, LinkedIn, And NYTimes.com with 32 Million Global visitors," Techcrunch, May 20. <http://www.techcrunch.com/2009/05/20twitter-surges-past-digg-linkedIn-and-nytimescom-with-32-million-global-visitors/>.
22. SEARCH ENGINE LAND (2013) <http://searchengineland.com/facebook-one-of-the-top-search-engines-i-dunno-about-that-11646.php> [ACCESSED 2013]
23. SHAWN, ERIC(2008) Report about Facebook groups, Fox News television, Dec1
24. SMITH, SHEPARD (2008) "Fox Report with Shepard Smith," Fox News, Dec. 2.
25. (2007) "My Four Rules: The Best You Can Do to Make It as a Writer," Light on Light through the blog, Aug .26. [HTTP:// paullv.libsyn.com/index.php? post\\_id=249175](HTTP://paullv.libsyn.com/index.php?post_id=249175)
26. STEPHEN P. BORGATTI, Principles of Questionnaire construction, 1996
27. TECHRADAR (2008) "Facebook, MySpace Statistics,"Jan.11. <http://techradar1.wordpress>.
28. Twitter (2010) <http://www.twitter.com> [ACCESSED 2013]
29. VERBEEK, P. P. 2003. Material hermeneutics. *Techne*, 6, 91-96.
30. YIN ROBERT K. (1994) Case Study Research, Design, and methods, Thousand Oaks, CA: Sage Publications.
31. Youtube (2010) <http://www.youtube.com> [ACCESSED 2013] <https://www.google.com/adsense/support/bin/answer.py?answer=71600>[ACCESSED 2013]
32. BENEDIKTSSON, D. 1989. Hermeneutics: Dimensions toward LIS Thinking. *Library and information science research*, 11, 201-34.

33. Laxmikant Tiwari, Rohit Raja, Vineet Awasthi, Rohit Miri, G.R. Sinha, Monagi H. Alkinani, Kemal Polat, Detection of lung nodule and cancer using novel Mask-3 FCM and TWEDLNN algorithms, *Measurement*, Volume 172, 2021, 108882, ISSN 0263-2241, <https://doi.org/10.1016/j.measurement.2020.108882>.
34. Rohit Raja, Sandeep Kumar, Md Rashid, Color Object Detection Based Image Retrieval using ROI Segmentation with Multi-Feature Method, in *Wireless Personal Communication Springer Journal*, Print ISSN0929-6212 online ISSN1572-834 pp-1-24, <https://doi.org/10.1007/s11277-019-07021-6/>
35. Rakesh Kumar Lenka, Amiya Kumar Rath, Zhiyuan Tan, Suraj Sharma, Deepak Puthal, N V R Simha, Rohit Raja, Shankar Sharan Tripathi, and Mukesh Prasad Building Scalable Cyber-Physical-Social Networking Infrastructure Using IoT and Low Power Sensors, Vol. 6, Iss. 1, pp.30162-30173, Print ISSN: 2169-3536, Online ISSN: 2169-3536, Digital Object Identifier: 10.1109/ACCESS.2018.2842760. (SCI Index)
36. Rohit Raja, Tilendra Shishir Sinha, Raj Kumar Patra and Shrikant Tiwari(2018), Physiological Trait Based Biometrical Authentication of Human-Face Using LGXP and ANN Techniques, *Int. J. of Information and Computer Security*, Vol. 10, Nos. 2/3, pp. 303-320.
37. Rohit Raja, Tilendra Shishir Sinha, Ravi Prakash Dubey (2016), Soft Computing and LGXP Techniques for Ear Authentication using Progressive Switching Pattern, Published in *International Journal of Engineering and Future Technology*, Vol. 2, Iss. 2, pp.66-86, ISSN: 2455-6432.
38. Rohit Raja, Tilendra Shishir Sinha, Ravi Prakash Dubey (2016), Orientation Calculation of human Face Using Symbolic techniques and ANFIS, Published in *International Journal of Engineering and Future Technology*, Vol. 7, Iss.7, pp. 37-50, ISSN: 2455-6432.
39. Rohit Raja, Tilendra Shishir Sinha, Ravi Prakash Dubey (2015), Recognition of human-face from side-view using progressive switching pattern and soft-computing technique, *Association for the Advancement of Modelling and Simulation Techniques in Enterprises, Advance B*, Vol. 58, N 1, pp. 14-34, ISSN: -1240-4543.
40. Tilendra Shishir Sinha, Raj kumar Patra, and Rohit Raja (2011) A Comprehensive analysis of human gait for abnormal foot recognition using Neuro-Genetic approach, *International Journal of Tomography and Statistics (IJTS)*, Vol. 16, No. W11, pp. 56-73, ISSN: 2319-3339, <http://ceser.res.in/ceserp/index.php/ijts>.