International Journal of Management, IT & Engineering
Vol. 8 Issue 2, February 2018,
ISSN: 2249-0558 Impact Factor: 7.119
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

USER TRAINING IS A MAJOR CHALLENGE IN THE IMPLEMENTATION OF GRP SYSTEMS- A STUDY OF NATIONAL ANIMAL DISEASE REPORTING SYSTEM (NADRS) AT BANGALORE DISTRICT.

Dr Ramesh Kulkarni*

Mr.Rangappa Yaraddi**

Abstract

In the recent years there has been enhancement in exercising the ERP/GRP applications in big concerns particularly in government organizations. As such the state governments are also adopting e-governance wherever possible. Animal husbandry is one of the areas wherein government has adopted an ERP named "National Animal Disease Reporting System" abbreviated as NADRS in all district head quarters. Whose purpose is to upload relevant data and information time to time to bring better control and management of animal health centers across the country. The adoption of any such new systems like NADRS is a challenging task and faces variety of problems while implementation and sometimes the system fail in their application due to these problems.

It has been observed in many instances of ERP/GRP applications implementation failure is in either design or in implementation phase. Especially in the context of Indian government sector, implantation of

Keywords:

Enterprise resource planning;

Govt resource planning;

NADRS;

Animal disease reporting system;

*** Associate Professor, Karnataka University, Dharwad, Karnataka, India.**

**** Research Scholar, Karnataka University, Dharwad Karnataka, India.**

ERP/GRP poses variety of challenges due to variety of bottlenecks in infrastructure, personnel and procedure. Modern era of digital technology provides for solution to changing needs and challenges of the organizations, government and public enterprise through high end applications like ERP/GRP/SAP which enhance the capacity and strengthens the organizations in performing their routine activities.

This paper aims to explore such implementation issues connected with NADRS with a special reference to rural Bangalore. In the pursuit 15 hospitals with NADRS implementation were studied in the rural areas of Bangalore district. Relevant data has been collected by interviewing doctors in concern with NADRS. Findings of the study shows that there is a clear scope of implementation, user training and education, hardware infrastructure and user friendliness of the NADRS application are the important issues and challenges in its implementation. Further the study reveals that, user training is a major concern for implementation and it should be taken care of in order to accomplish GRP solutions. Understanding the issues and challenges will help the concern organization to adopt the appropriate strategies leading to success of ERP/GRP system in organization.

1. Introduction of NADRS.

The National Animal Disease Reporting System, in short NADRS, is a new Centrally Sponsored Scheme proposed for implementation during last three years of the 11th Five Year Plan with cent

percent government of India assistance. India has a large animal population comprising, as per Livestock Census (2003), 485 million of livestock and a one-time count of 489 million poultry. Livestock also plays an important role in India's economy, contributing (along with fisheries) 5.21% to the country's GDP and 31.6% to the agriculture GDP in 2007-08. The livestock sector has immense potential. It has emerged as the key driver of agricultural growth in the country.

The biggest impediment to growth of this sector however is the large-scale prevalence of diseases such as Foot and Mouth Disease (FMD), Hemorrhagic Septicemia (HS), Black Quarter (BQ) in cattle, Pestedes Petits Ruminants (PPR) & Sheep-Goat Pox in sheep and goats and Swine Fever in pigs, which drastically affect the productivity of animals. The presence of animal diseases also deters domestic and foreign investment in the livestock sector. These diseases not only wreck havoc on the existing stock but also constrain market access to our livestock sector, in spite of the fact that we have ample scope to participate in the global trade.

The economic impact of the diseases in livestock results from both morbidity and mortality. This includes the direct losses due to mortality, reduced production in terms of milk, meat, wool, hide and skins, as well as indirect loss due to abortions, subsequent infertility, sterility, and deterioration of semen quality. Controlling animal diseases is of upmost important for preventing these losses and livestock industry to progress for the benefit of the livestock farmers.

Benefits of NADRS: The system offers several advantages to the owners of livestock, to the department of animal husbandry administration and to the economy as a whole. Few of the important benefits are listed below;

To livestock owners: Management of livestock needs information environmental changes from time to time. The farm owners continuously keep accessing the information related to rain, weather, heat and humidity which will affect the health of the cattle. They also would require knowing timely information on cattle feed, disease, productivity, marketing opportunity and so on. As such the following few are the major advantages that NADRS gives to cattle farmers.

1. Better management of diseases of their livestock

2. Availability of veterinary service
3. Increased economic gain from higher productivity of animals
4. Improved market acceptability of their livestock products

To animal husbandry department: On the other hand, the department of animal husbandry has a role in providing the useful guidance, information, and timely support in health management, providing market facility and schemes of the government to farmers. Especially the department requires reaching almost all beneficiaries in situations of disease, opportunities in market, subsidiary funding and many more. As such NADRS helps the department in following few ways, availability of a common channel for dissemination of animal disease information to all stakeholders', availability of SMS-based instant alert system for outbreak of diseases & spread of diseases, remedial measures and expert advice, enabling prompt control of diseases, availability of enhanced decision support system with GIS integration for effective and timely decision making.

Benefits to economy: So also to economy NADRS in a consolidated effect provides the following benefit to the society in the form of improvisation in economic activities. Increased livestock production and productivity, improved market acceptability of domestic livestock products in international trade, saving of costs otherwise incurred for treatment of animals, fillip to the growth of the livestock sector, leading to increased employment generation and higher availability of animal protein to the population.

NADRS was first implemented in 2012-13 by Central Government in all districts of India. The NADRS system will be operated by veterinary doctors and medical officers of the place. The implementation of the programming has been very challenging as, the department was lacking infrastructure and as well as human resource scarcity in the Karnataka state. Out of the interaction with the doctors operating in the department, the most common and significant challenges have been identified. The major challenges being, user training, user friendliness of the software, availability of hardware, availability of network connectivity, GRP connectivity & customer care, appointment of system operators, and many more. These challenges need to be studied and addressed in order to implement the system to obtain its optimum utilization.

Objectives of the study:

With this background this paper aims to explore the most common implementation challenges and to identify the most suffered challenge among them. Therefore, following objectives are ketpt in mind during the study.

1. To explore the challenges in implementing GRP.
2. To study the challenges in implementing the GRP as a whole and NADRS in particular.
3. To identify the major challenge in the implementation of NADRS among the explored.

Hypothesis of the study: Having these objective in mind four research hypothesis have been formulated to test whether the identified challenges are significant or not. Therefore we formulate:

H1: User friendliness has no significant effect on the implementation of NADRS.

H2: User training has no significant effect on the implementation of NADRS.

H3A: Availability of Hardware and infrastructure has no significant effect on implementation of NADRS.

H3B: Network connectivity has no significant effect on implementation of NADRS.

H4: Human Resource scarcity has no significant effect on implementation of NADRS.

2. Research Method and Data collection:

Keeping the above objectives in mind, a comprehensive research methodology is adapted using an explorative research design and the following methodology is designed to conduct the study.

Sample: Veterinary doctors in Bangalore urban district who are working on the NADRS system were chosen to be the sample points in the study. They were consulted personally and a closed interaction with them has been recorded in the questionnaire constructed to explore the problems they are facing in using this NADRS.

Sample points: This system NADRS is implemented only in taluk head quarters where there is a State government Veterinary hospitals are functioning and which are normally being operated by the Veterinary doctors posted in these hospitals. There are 15 such doctors functioning in the Bangalore urban districts were the study is conducted, and they have been visited and consulted to extract information for the study. Hence a sample of 15 doctors working in veterinary hospitals has been chosen for the study.

Questionnaire: A questionnaire consisting of 12 questions explaining the challenges was self administered and filled during the interaction with the respondents. The data collected includes both demographic information of the respondents and also assessments of challenges in implementation. The convenient sampling technique was used to survey the respondents.

Statistical Analysis: The collected information from the questionnaire is then compiled into tables by using Ms-Excel and SPSS software. A simple descriptive statistical analysis tools including percentages, Mean responses, standard deviation and students t-statistic etc have been used to test the simple hypothesis assumed in the study.

3. Analysis and Findings:

The respondents were veterinary doctors and were approached for the study without any geographic boundary in Bangalore urban, Karnataka state. Total 12 different questions are asked to the respondents exploring the challenges such as training and education, about hardware infrastructure, user friendliness of the NADRS application, utilization of NADRS by end user (veterinary doctors) etc. Secondary data were collected by a government web sites and departmental documents. Review of literature shows that there are noticeable implementation issues which are used for successful ERP system implementation. Review of departmental websites has given some documents related to training, hardware installation, and internet connection by BSNL, user manuals of NADRS etc. The questioner contained questions with multiple choices in a 5 point likert scale, ranging strongly agree, agree, neutral, disagree, and strongly disagree. Then the responses of 15 respondents were collected and the observations were compiled using SPSS software. Further statistical analysis using one sample T –Test and descriptive statistics were computed and analyzed in the subsequent paragraphs.

The responses collected from 15 respondents were captured in the questionnaire through personal interview with each of the respondents on job. The respondents opine that, NADRS implementation is facing several problems and is a difficult proposition by the government, as they stressed upon several infrastructure problems more than operating problems. The demographic profiles of the respondents are tabulated in Table1.

Table 1: Demographic profile of the respondents

	No of respondents	% of respondents
Age		
30-40 years	11	73%
40- 50 years	4	26%
Sex		
Male	9	60%
Female	6	40%
Marital status		
Unmarried	2	13%
Married	13	87%
Designation		
Veterinary Doctors	15	100%
Others	0	0%

Source: Authors own compilation**.**

From the responses collected from the 15 veterinary doctors, it is compiled to extract four major challenges that are restricting the implementation of NADRS in the state.

Table 2: Opinion of the respondents on Challenges

S.No	Challenges	n	SA	A	N	DA	SDA	Mean	SD
1	User friendliness of NADRS	15	6	7	2	0	0	1.733	0.703
2	Availability Hardware and infrastructure facility	15	8	4	1	1	1	1.866	1.245
3	Network connectivity	15	8	4	1	1	1	1.866	1.245
4	Training of NADRS	15	0	13	2	0	0	2.133	0.351
5	Human Resource Scarcity for NADRS	15	1	10	1	2	1	2.400	0.985

Source: Authors own compilation**.**

Table 3 : Consolidated Opinion of the respondents revealing challenges

		No	No of respondents opining		% age Respondents	
S.No	Challenges	N	Problem	No Problem	Problem	No Problem
1	User friendliness of NADRS	15	10	5	66	14
2	Availability of Hardware and infrastructure facility	15	12	3	80	20
3	Network connectivity	15	11	4	73	27
4	User Training of NADRS	15	12	3	80	20
5	Human Resource Scarcity for NADRS	15	10	5	66	14

Table 4:Challenges in implementations of NADRS

S.No	**Challenges**	**n**	**df**	**t-statistics**	**sig.(2 tailed)**	**Hypothesis**
1	User friendliness of NADRS	15	14	-6.971	0.000	H1:rejected
2	Training of NADRS	15	14	-3.523	0.003	H2:rejected
3	Availability Hardware and infrastructure facility	15	14	-3.523	0.003	H3A:rejected
4	Network Connectivity	15	14	-9.539	0.000	H3B:rejected
5	Scarcity for Human Resources	15	14	-2.358	0.033	H4:rejected

Source: Authors own compilation**.**

Discussion on findings: The study had focused on challenges in implementation of NADRS software application, in particular training and education, user friendliness of the software and hardware infrastructure availability. The finding of this paper is based on the analysis of both primary and secondary data. The study had shown a strong willingness for some more training

sessions in concern with NADRS software application. And during the training practical sessions has to be incorporated for the effectiveness of the program.

Table 1 consolidates the demographic profile of the respondents. 15 veterinary doctors were consulted for the study. Among them 73% are between the age group of 30-40 years and 26% of the respondents are between the age group of 40-50 years. Sex ration of the respondents were 60:40, i.e.60% of the respondents are male and 40% are female respondents. Among the respondents 87% are married and 13% respondents were unmarried.

Table 2 consolidates about the opinion of the respondents. Five factors are listed in the table. The first factor is" user friendliness of NADRS". The major responses are either strongly agrees or agree i.e.86% of the responses are in favor of the statement. The second factor is "training of NADRS".As shown in the table 86% of the responses are in favor of the second factor. And 80% of the responses say training of NADRS is a major challenge in implementation of NADRS.The third and fourth factors in the table are "availability of hardware and infrastructure facility"&"Network connectivity". For this variable only 13% of the responses are not favorable with the third and fourth factor. The fifth factor in table is 'human resource scarcity for NADRS". For this factor, 73% responses are in favorable with fifth factor.

User friendliness: Most of the GRP systems face this problem of user not being comfortable in operating the system due to input/output screens not being interactive and supportive to the user in feeding data. The options in the screens of data input and GUI interfaces not being properly planned create lot of confusion in the minds of the user. Many a times it happens that, the user being a non technical personnel may not be able to understand the software operations while work. This has been one of the challenges in NADRS also. It is evident from table 2 above, that, around 66% of the respondents have opined that, the NADRS has not been user friendly and the screens of input have to be redesigned. Therefore User friendliness has been one of the challenges observed in this study.

User training: The success or failure of any GRP rests on how effectively the user is trained. Since the user in Government sector many a times will be a non technical person due to

recruitment problems. Such operators need training and hands on experience to operate the system. Due to variety of problems and procedures in the Government sector, an employee getting trained is delayed for a longer period. Though the system being installed, there would be no proper person deputed for training on such systems is a commonly seen problem in the Govt. sector. This has also been revealed in this study. Around 80 % of the respondents opine that, user training has not happened properly and the doctors are operating the systems on their own judgment on the software inputs. Whereas user training is not that easily be possible in the present setup in the Veterinary department. Therefore this has been one of the major challenges observed in this study.

Hardware & Network Availability: It is obvious that, when we plan to install a computerized system, then we must necessarily first install the required hardware and allied equipments. Whereas in case of NADRS, few of the centers have not been fully equipped with the hardware required to run the system. The respondents express their inability to possess the state of art infrastructure in order to implement NADRS to the expected precision. Out of 15 respondents 12 of them forming 80% of the respondents opine that, Hardware and networking is not up to the mark to facilitate running of NADRS software in the centre. This is prompting that, availability of right infrastructure is also one of the serious challenges in implementing NADRS.

Human resources: So also Human resources. In the present context, the Govt has not appointed trained technical persons to operate the system, as it is difficult to operate any automation systems without the technical support. At present the Physicians who are handling the health units are operating the system and are not technically trained to handle problems while working with systems. Out of the 15 respondents around 10 of them forming 66% of the respondents opine that, dedicated staff must be appointed to handle the system. Which has been one of the daunting challenge, and government needs to act early in order to maintain the systems in place.

Table 3 will explain the consolidated opinion of the respondents revealing challenges. Around 66% of the respondents will agree that the user friendliness and human resource scarcity for NADRS is a major constraint in implementation of NADRS. Similarly 80% of the respondents will agree that the availability of hardware and infrastructure facility and user training of

NADRS is a major challenge. Further 73% of the respondents feel, network connectivity is a major hurdle for implementation of NADRS. But during secondary data there are some noticeable documents from BSNL is revived about network connectivity.

Table 4 explains about the challenges in implementation of NADRS. The one sample T-test is applied for the obtained responses in table 2. From the table 4 it is very clear that, the significance value of 'user friendliness of NADRS is 0% of the confidence level. Hence hypothesis H1 will be rejected. Based on the values we can say that 'user friendliness of NADRS 'has a significant effect on the implementation of NADRS. The second factor in the table is 'training of NADRS'. This has a confidence value of 3%. This means training of NADRS has a significant effect on implementation of NADRS. Hence hypothesis H2 will be rejected. Similarly the third and fourth factor 'availability of hardware and infrastructure for NADRS' and 'Network connectivity' has a significance value 0.3% and 0% respectively. Hence hypothesis H3A and H3B will be rejected. This means availability of hardware and infrastructure for NADRS has a significant effect of the implementation of NADRS. The fifth factor in the table is 'Human resource scarcity for NADRS', this has a confidence level of 3% with a t-value -2.358. Hence H4 will be rejected. For all the above tests, mean value is taken as 3.0 in one sample t- test using SPSS.

Further scope of research:

During the study no particular reason was identified about disease updation and outbreaks in NADRS. And "hardware infrastructure and utilization" has shown a significant reason of cause during this study. The study can be enhanced by considering some more behavioral factors of the user and other stake holders which affects the implementation of NADRS.

4. Conclusion

Implementation of any automated system always poses challenges at initial stage of its implementation. NADRS is not an exception to it. The current study explores 5 challenges that, are restricting the users in operating the NADRS by and large. User friendliness of the software, User training, network connectivity, hardware and infrastructure availability, and the human resources to handle the systems. Among them User training has been a major issue, stressed by 80% of the respondents, so that, the affairs in this concern must immediately focus to organize

suitable training programmes for the operating staff until the dedicated staff is appointed in near future.

The process of ERP/GRP implementation requires a different approach as compared to traditional IT software implementation. This is due to characteristics of ERP/GRP solutions which require Business Process Reengineering. This gap need the attention to make any ERP/GRP solution to became successful. The study has focused on the only four challenges mentioned above but there are other challenges also which are associated with ERP /GRP package implementation.

References:

1. Government of India official website of NADRS. http://www.nadrs.gov.in/SitePages/Home_NADRS.aspx
2. Saquib Anwar and Rubana Mohsin : ERP project management in public sector- key issues and strategies , IEEE 1530-1605/11 proceedings of the 44th Hawaii international conferences on system sciences page[1 -10], 2011.
3. Karnataka veterinary department website. http://stg1.kar.nic.in/ahvs/blockreps/rblkfmt3.aspx
4. Cliffe,Saran ,ERP implementation, Harvard Business Review volume 7 issue 3,1997,page 50-53.
5. Bryan,Mandy, ERP Mayday MIS Australia, November 1998 page: 48-54.
6. Suraj kumar Mukti & A.M.Rawani, ERP system implementation issues and challenges in developing nation, ARPN Journal of Engineering and Applied Science 12/06/2016 ISSN:1819-6608.
7. Parijat Upadhyay & Rana Basu, A comparative study of issues affecting ERP implementation in large scale and medium scale enterprises in India: A pareto approach, International Journal of Computer Applications, 1/10/2010 ISBN:0975-8887.
8. Rana Basu, Parijiat Upadhyay,Manik C. Das,Pranab K Dan, An approach to identify issues affecting ERP implementation, Journal of Industrial Engineering and Management, 2013 ISSN:2013-0953.
9. Gordon Baxter, White paper: Key issues in ERP Implementation, Engineering and Physical Science Research council (EPSRC) (www.iscits.org).