E-yojna Assistance and computerization of Swarnjayanti Gram Swarozgar Yojana through it: Analysis, Development and Implementation

Abstract

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ABSTRACT

Before Independence, there was a wide difference between the poor and the rich in Indian society. This was originated specially due to analysis of different kinds of works for different groups ("Varna Vyashtha"). In this system, your work is fixed from your birth and your income against your work from the total productions of village is definite Therefore there wasn't unemployment. Not only this, there was a system in which the rich people gave some amount and grains to people doing some works on occasion and festival's days. In this way poor people got the benefits from society. Now a day, this system does not exist. So the government declares different Yojnas and the poorer will take benefit of these yojnas.

Approximately more than 70 % people of total population of India live in villages. Considering this fact the Ministry of Rural Development (MoRD), Government of India declares and implements different yojnas to uplift the lower level or poorer. Besides this, new yojnas are also added time to time as per requirement. Government also closes the yojnas which are already finished and not required. The fund required for these yojna's is fulfilled by the Government and International Banks (Global Banks).

The Ministry of Rural Development (MoRD) is divided in three different divisions. They are as follow:
(1) Department of Rural Development (DRD)
(2) Department of Land Resource (DoLR)
(3) Department of Drinking Water Supply (DDWS)

The State Rural Development Department (SRD) at state level, District Rural Development Agency (DRDA) at district level, Taluka Panchyat at Taluka level and Gram Panchyat at village level are working to assist the Ministry of Rural Development.

The procedure to integrate and maintain these works from people by the Government is going to be complex and expensive. There are inventions of various technical instruments like computers, internet and mobile phone. There are possibilities that these technologies can reach to common people of society. Therefore the E-Government projects are started to reduce the complexity of various yojnas of Government with the help of computer, internet and the mobile phone.

A model developed by the use of the latest instruments which make various government dealings (transaction) transparent, fast, accurate through use of Government information and communication technologies, is called E-Government. Thus with the help of E-Government, a model can be prepared through which Government's activities and works become simple, fast, effective and quick replying.

There are many yojnas running by the Government of Gujarat. It is difficult for common people to know about the yojnas which satisfy their requirement. Therefore the people reduce their requirement and gain less benefit by selecting another yojna instead of those which are more useful for their requirement. Thus the common people will not take suitable benefit due to lack of information about various yojnas. So it is very important to prepare a procedure which will take information about people into computer and do necessary procedures for taking decision about better yojna.

Considering the main aim of yojnas, that is, to uplift of backward class people, almost all yojnas, are mainly for schedule tribe, schedule caste and baxi punch people. Some yojnas are for specific castes only. While in other yojna some percentage of reservation for specific castes is compulsory. The women, physically handicapped people, people living below the poverty level and families having poor economical conditions are also covered in many yojnas.

In E-Yojna Assistance, people or group want to take advantage of yojna then it is necessary to know the caste, sex, physical disability and economical conditions. In some yojnas, it is necessary to know whether people or group belongs to self-help group or milk mandli (agency). Knowing these types of facts E-Yojna Assistance try to study (calculate) presently running yojnas and give proper guidance for better selection.

The people or group requires mostly subsidy or loan from the yojnas. The following are the basic causes for their requirement.

- For earning.
- To increase working capital for small scale business.
- To build residence.
- To buy fertilizer, insecticide, pesticides, and seasonal seeds.
- During failure of crops.
- For study and higher education of their sons/daughters.
- Social occasions of families.

Besides these, loan or subsidy is required for the group work like

- To construct roads.
- Well & tube well construction and repairing (to take it interior).
- To purchase required instruments for milk agency.
- Street light, road light.
- Primary school.
- Public library.
- Public latrine.

Thus we can conclude that the loan given to particular man is less than that given to group.

A model has to be prepared through which, a common man can understand about yojna which is more useful as per his requirement without taking the help of other. A use of computer to take decision is not final one. But computer can be helpful for solving their difficulties in yojna's selection procedure.

A list is prepared about beneficiaries of all yojna. Also a list is prepared about information regarding the users of these yojnas and what is a minimum requirement for use of yojna. If a person uses yojnas as per required parameters, then list shows the information about benefit (subsidy, loan) of that yojna. In case there are more than one useful yojnas for person, it is good to show information about next yojna when he/she does not select first yojna. The procedure is continued till a person selects a specific yojna.

The Yojnas selected for study are as follow:
(1)   Swarnjayanti Gram Swarozgar Yojana (SGSY)
(2)   Indira Awaas Yojana (IAY)
(3)   Credit-Cum-Subsidy Scheme for Rural Housing
(4)   National Social Assistance Programme (NSAP)
(5)   Employment Assurance Scheme
(6)   Development of Bee Keeping for Improving Crop Productivity
(7)   National Physically Handicapped Finance and Development Corporation
(8)   Pre-Matric Scholarship to the children of those Engaged in Unclean Occupations
(9)   Pre-Matric Scholarship for other Backward Classes
(10)   Grain Bank

After studying the information regarding the various yojnas, the factors affecting these yojnas are as follow:

1) Member of SHG
2) BPL
3) Schedule Caste
4) Schedule Tribe
5) Female
6) Physically Handicap
7) For Group
8) Farmer
9) Maximum subsidy
10) Maximum Loan
11) Housing subsidy/Loan
12) Training subsidy
13) Age
14) Yearly Income
15) Educational Qualification.
16) Technical Qualification
17) Technical Experience
18) Work Experience
19) Education & Study Standard
20) Staying in hostel
21) Working Days/Year
22) Family wise number of person getting work
23) Time Limit
24) Person from drought prone, desert, tribal and hilly area
25) Unclean Occupations

In this study, various tabulated information are prepared as follow.

- List of essential/compulsory factors for yojna's selection.
- List of optional factors for yojna's selection.
- List of economical benefit for yojna's selection.
- List of all yojna and all effecting factors.
- List of all yojna and maximum weighted indexes of all effecting factors.
- Table of standard about yojna's selection.

To prepare the weighted index table, all points are mentioned in detail. Above mentioned points are also useful to prepare factors & its weight value for new yojnas in future.

In the study The answers (information) generated from this mathematical model using mathematical information by traditional difficulties are explained using three different examples.

To find shortest path from the graph showing weighted cost to each path is normal practice. Like this, a graph is also prepared to show the yojna and its factors relationship (weight). It is easier to understand graph showing information about weight.

Implementing this prepared model, information from people is gathered about the affecting factors of yojna. This information is converted to a simple form so that common people can understand. Here all forms are prepared in regional language (in Gujarati). The people from out of Gujarat State are also living in Gujarat. Therefore the first form of E-Yojna Assistance is designed in such a way that it display this in Gujarati or Hindi language.

The information regarding various forms of E-Yojna Assistance is given. Besides these, information about different tables like form_table, yojna_name_tab, field_name_tab, type_name_tab, weight_table, parameter, yojna_info and all_calc_tab are also shown. E-Yojna Assistance calculates from Information gathered from people and from database of yojna information. It is explained with the help of program codes.

There are two possibilities after completion of calculation. To see the information generated from calculation or to see the list of selected yojna after calculation. Normally people desire to see the list of selected yojna after calculation. Both possibilities are explained using the program

code. In second choice, yojnas are listed either in ascending or descending order of calculated weight value. One can see the information about the loan and subsidy value for particular yojna, when one can change the yojna selection from drop-down list.

The complete details regarding a specific yojna is available by selecting a yojna from the list prepared by E-Yojna Assistance. People and officers need not remember the changes which are made off and on in yojnas. After looking selected yojna's information if that yojna is appropriate for them then they can see the selected yojna website (if website is prepared).

Information regarding the E-Yojna Assistance System is prepared in the form of Algorithm flow. So that one can use this algorithm flow to make changes in future.

A person can get more benefit if yojna selected by E-Yojna Assistance is being computerized. In the study, instead of computerizing all yojnas, Swarnjayanti Gram Swarozgar Yojana (SGSY) is computerized. The primary information regarding Swarnjayanti Gram Swarozgar Yojana (SGSY) and primary information regarding Self-help group (an important factor of this yojna), is given. After that the information regarding the computerization of Swarnjayanti Gram Swarozgar Yojana (SGSY) is also given.

Swarnjayanti Gram Swarozgar Yojana (SGSY) computerization is divided in seven menus. They are as follow

- Administrator
- New Member or group
- Loan application
- TDO

- Meeting
- Report
- Difficulties

An administrator menu is again divided in six submenus. They are as 'District', 'Taluka', 'Village', 'BPL information', 'Yojna Fund', 'Bank'. The 'Yojna fund' is again subdivided into 'Allocation of yojna fund' and 'payment of yojna fund'. The 'Bank' is also subdivided into 'Bank information' and 'Bank A/c Information'

The 'New member or group' menu is also divided into 'New Member' or 'New Group'. The 'Meeting' menu is divided into three submenus. They are

- Information before group meeting.
- Information after group meeting.
- Group meeting analysis.

The 'Report' menu is also divided into 'Loan form' and 'TDO form'.

Information about computerization design of Swarnjayanti Gram Swarozgar Yojana (SGSY), various forms and affected database tables is given. The distribution of amount as per village can be achieved automatically, if we enter the amount granted for allocation and paid by Central and State Government.

The first time users of this system should provide the full information regarding these. But when user uses this system next time, the information that is entered before is utilized. In this way the system saves time. As per example, if a person required a loan, then he/she should fill up the form for the earlier given information. But he/she will make changes in the already filled form.

To make 'self-help group' more simple, the various information about group meeting are stored in this system. They are as follow

- Points of group meeting.
- Number of present members in meeting.
- Number of members accepting or rejecting the meeting points.

Also evaluation process of self-help group's is prepared.

If computerized complete system is implemented then it is good. But currently by protocol, printed form on paper is only accepted at Government office. The facility is also provided in this system to print the duly filled prepared form. Via 'Report' option of the system, one can print a form with the help of 'Loan Form' and 'TDO form'

The 'Unicode' is used to display the form in Gujarati during the study. The Unicode Gujarati font 'Shruti' is used for Gujarati language. The Unicode Hindi font 'Mangal' is used for Hindi language. Microsoft Visual Studio .Net 2003(Microsoft Development Environment 2003 Version 7.1.3088 and Microsoft .Net Framework 1.1 version 1.1.4322) is used for preparing all programs. VB.NET language is used to prepare ASP.NET programs. A form can be easily made with Visual Studio. A form is saved as Unicode (UTF-8 with signature) - Codepage 65001 when UNICODE is used in the form.

A multilingual facility of ASP.NET is used to display the First form of E-Yojan Assistance either in Gujarati or Hindi. It is explained how resource file is prepared and how the information is written in resource file while using Gujarati or Hindi Language. How to use this prepared resource file is also explained. Once prepared resource file we have to use in program that is explain with the code.

Normally Crystal Report is used to prepare the report in ASP.NET. This is also explained how to use this facility. Crystal report has some limitation, for example after filling information in a Swarnjayanti Gram Swarozgar Yojana (SGSY) loan forms, we required report of that information in Gujarat. It is not possible by crystal report but it is solved by normal ASP.NET form.

HTML objects are used in place of WEB form objects in all most all forms. The reason for using HTML objects is mentioned. To get quick response without accessing server, Java script is used in many forms. As per example while filling the Swarnjayanti Gram Swarozgar Yojana (SGSY) loan form, the amount is to be given for three different loans but when any one of amounts is entered then the total amount is to be displayed in form as words. This requirement is achieved by function using Java Script which convert the figure to word in Gujarati.

Normally a common person is going to use the computerized Swarnjayanti Gram Swarozgar Yojana (SGSY). So a special facility of audio sound is provided. An audio sound facility is used for information while filling the field of the loan form for Swarnjayanti Gram Swarozgar Yojana (SGSY). Logic is also developed so that a common man can hear total amount while filling the loan form. The code for audio sound is explained in study report.

The hardware and software used in this system is explained. Initially to use open source software, a program development is started in JSP. Due to various difficulties in the Java technique, later on the system is developed using the ASP.NET of VB.NET language. Microsoft Visual Studio .NET 2003 is used for that purpose.

All tables used in the system are shown. Windows-XP operating system is necessary to install and to implement E-Yojna Assistance System. For that IIS v5.1 must be running on Windows–XP operating system. Windows–XP operating system is essential to use this software because the system uses Unicode to display forms in Gujarati. In the research study it is explained how to use & install Gujarati language using Unicode. Besides this, how to installed IIS v5.1 is also explained. In this study, the common users of this system can look different forms on screens one by one.