

Novel Approach of Communication Interface for Rural Women Empowerment through ICT

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Abstract:

Recently, a lot of interest has been seen in employing information technology and communication for achieving women empowerment. Still, solving problems at individual level is however overlooked. Of all others, especially women empowerment can be achieved by communicating knowledge, ideas and culture. This paper focuses on preliminary guidelines for designing of web portal through which communication may be established between rural and urban women. End users can access it through internet service or text messages and audio calls on cellphones using enhanced converters on web portal end. This paper discusses on how participants will be able to communicate through activities like area wise question forums, expert guidance on issues related to problems faced by women and their children, provision of opportunities to advertise products for and by women. Its primary focus is on integrating government policies with various ongoing efforts in this area by providing a common platform. It also ensures training for women who have political authority in the respective village. It will be web interface which will convey answers to questions through communication, emulating a helpline. This paper concludes that designing such a portal will not be sufficient to satisfy the communication purpose, success of portal will depend on complementary activities publicity and maintenance process.

Keywords: *ICT, rural women empowerment, web portal*

I. INTRODUCTION

The contribution of technology in bringing social and economic development has been well recognized globally. However, communicating information to rural communities continues to remain as a major challenge even today. Women empowerment is an active and multidimensional process, which enables women to realize their identity and power in all aspects of life. The need for empowerment of rural women hardly needs justification.

Objective of ICT can be outlined as communicating knowledge, ideas and expanding the reach of individual. Further extending its horizons, current era empowers ICT for helping supportive

hands to reach till the needy . Utilizing this power It is time we should absorb rural community in the mainstream, especially rural woman who needs to be nourished, rejuvenated, inspired and connected to the current growth.

II. MOTIVATION

Undoubtedly women play a pivotal role ever since the beginning of the mankind and will continue to do so till the time mankind cease to exist. Women plays many role as a loving mother, as a caring sister or a supportive wife however more than often we fail to understand the problems that she might be facing while playing her different roles. With an advent of modernization, state of the art information technology & increased awareness we had achieved an unprecedented landmark towards understanding and resolving women problems.

Today a modern women living in an urban society can discuss her problems related to health, education, career etc., Through modern information technology which includes mobile, internet & social networking. Rural women are more vulnerable and are subjected to severe health issues mostly due to lack of awareness, better education & career is still a distant dream, had she been able to use internet or network with other people using modern technology like her urban counterpart she would have been leading a better life and in larger perspective a better society. We cannot judge women empowerment just by considering the present state of women living in urban society we have to empower less privileged, less equipped rural women to the same level as that of her urban counterpart. If we are looking forward for an inclusive development towards women empowerment. We have to bridge the technological gap between the rural & urban society in order to achieve an all-inclusive growth & development.

III. BACKGROUND STUDY

India has a large number of ICT pilots implemented by different kinds of organizations. We tried to look at a cross-section of initiatives to see how far these initiatives are trying to address the concerns and needs of rural women. The review of several experiences led us to the following set of findings.

National mission for empowerment of women, It is the initiative taken by the Government to ensure that the benefits of all programs reach the beneficiaries on a convergent basis. Related website update interested community about events ,schemes, vacancies. This is just a way to inform common people. This is not ICT program but it mostly regulates all the women empowerment efforts in India. Women helpline number is another action taken by Indian government. On calling 1298, which is also an Ambulance Access number from any mobile or land line, women in distress are directed to relevant NGO's who counsel and provide assistance. For any case which requires urgent action, the calls are diverted to the police Helpline 103. Only area in which this helpline is contributing is security of women. It do not address other information needs.[1]

One ICT based interesting initiative is a AQUA (almost all Questions Answered), which is a multi-lingual online question and answer forum- which provides online answers to questions asked by farmers and agri-professionals over the internet. This is parallel concept to what we are trying to propose through this paper but its limited to agriculture area. Number of television programs telecast over Doordarshan in many different states and in many different languages, targeting approximately 50% of India's population. Sometime they allow viewers to call and ask questions, but limited time period and lack of anonymity restrict most of the audience from clarifying their questions. [2]

IKSL is a joint venture between Bharti Airtel and the Indian Farmers Fertiliser Cooperative (IFFCO). Farmers who purchase a Bharti Airtel "Green SIM" have access to value added services which include daily agri-voice messages (weather, crop/animal husbandry advice, market prices, government schemes etc) and an agri-helpline (costs Rs. 1 per minute). This program is designed for agriculture needs and it supports only one way communication.[1]

Cell phone operated mobile audio communication and conferencing system (COMBACCS) . This method is similar to use of mobile phone dialogue between two individuals, in which on one side a larger number of audience/group can hear through a loudspeaker. It needs a mobile connection and an active SIM card between the expert resource persons and the group. The system at the group's end has mobile phone connected to a loud speaker. Video SEWA (VS) is another initiative which was established as a means to provide training to the members of SEWA and to motivate, mobilize and strengthen the existing membership of SEWA through the use of video recordings and tapes.[1]

In most of the other ICT initiatives that depend on print media, internet kiosks, portals, call centers, mobile, video digital photography etc. There is not enough evidence to show its wider access and use by women. This could be because these tools and its applications used are intended for the rural communities without any specific attention for women's special needs for information and their constraints in accessing these. A few set of common characteristics are observed . These are as follows:

- 1) Information needs of rural women vary widely. Even in a single location (village or a group of neighboring village) there is a wide diversity in the types of information, women are interested in. Differences in literacy, economic status (poverty) and occupation determine the kinds of information women are interested in.
- 2) Women who are keen to know more but they do not know from where they can obtain the right information.

After analyzing some prior work we also analyzed some tools which web portal will use.

Table No. 1

	Contribution to rural women empowerment	Strengths	Limitations
Mobile	Quick access to timely and relevant information as voice or text by a large number of subscriber	<ul style="list-style-type: none"> • Very useful for disseminating dynamic and locally generated information on weather, prices, crop tips, government schemes. • Increasingly being adopted by mobile companies as a value added service to mobiles on a subscription basis (as a commercial business venture) 	<ul style="list-style-type: none"> • Relatively better of farmers are able to use the information • Little evidence of women subscribing to the value added services
Portal	<p>Knowledge and information gain by ways of accessing by range of useful information</p> <p>Relevant for women (agriculture, health etc) Increasingly e-commerce and online question and answer service</p>	Very useful for knowledge workers involved in rural development and rural women empowerment	<ul style="list-style-type: none"> • Mostly generic information and in English • Portals vary widely in their user friendliness. Considering the low rural female literacy levels, human intermediation critical for rural women to make fuller use of this Information

Table adapted from [1]

IV. CURRENT SCENARIO

We have come up with a new approach, which will create a space and platform where women can come together and co-create in being a part of the global shift towards a more aware, healthy, balanced and understanding society. In this paper we are proposing protocol of Web portal which will act as a communication interface among women in India, more specifically urban and rural women interaction. Through such social sharing we aim to establish, maintain, and enhance social connections and closeness between woman.

Women in urban areas who are likely to be balancing careers with raising families, not to mention taking care of aging parents, going to the gym, and keeping up with e-mail. This region finds most of the solutions to their problems by utilizing their education and technology. Communication interface will be the pathway through which this people can help the needy by using their knowledge and access to technology.

V. METHODOLOGY

To achieve the objective of communication interface we are proposing some design guidelines of a web portal which will enable rural women to have access to modern communication & networking platform where they can share, discuss & seek solutions for their common problems both at individual as well as at community level. It is a website that brings information together from diverse sources in a uniform way. Here we are discussing about government web portal with some participation of private sector to some extent.

I. COMMUNICATION INTERFACE

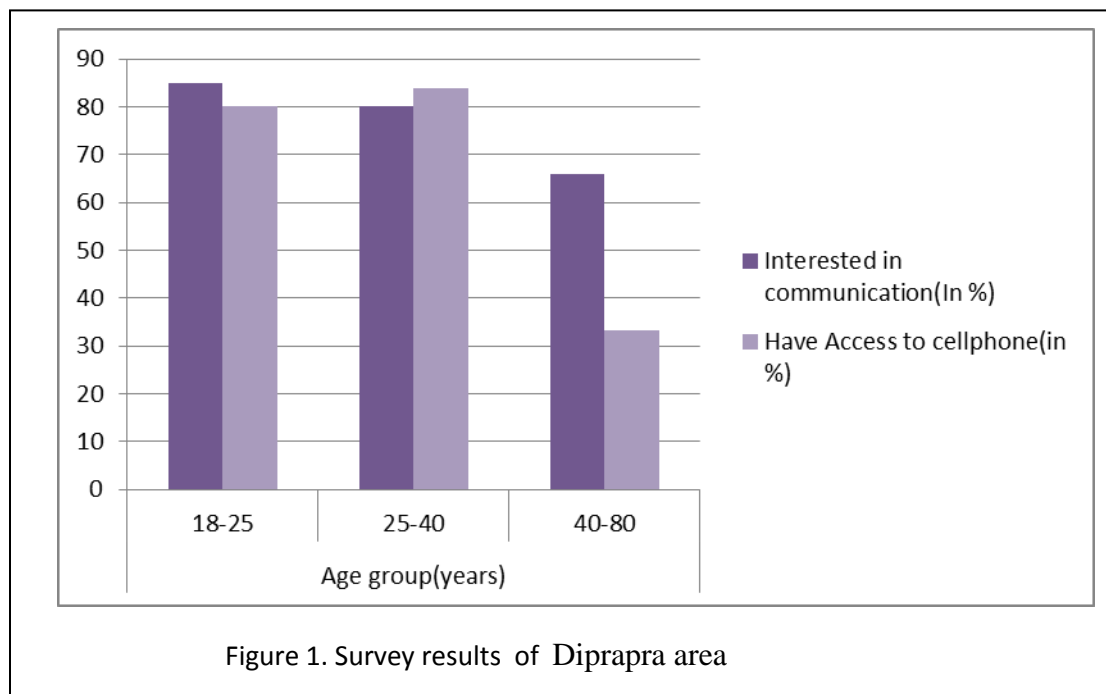
This web portal aims to achieve communication between rural and urban people especially women. First method for interaction will be through section wise question answer forum like other question answering websites . Question can be asked through text message , audio call or internet . This question will be displayed on the forum as a new thread on the page of particular topic to which question relates. Visibility of this question is a matter of concern. Here we have taken an assumption that questions will be visible to all. Person interested in answering will answer in on the below in the comment section of the question. Given answer will be displayed below question and if the question is asked through text message or audio call then given answer will be sent as a text message to the number associated with the question in the database .

Video conferencing may be another method of communication. Availability and usage rules of this facility will depend on the administrator of the website. Providing this facility independently like Gmail and Facebook or availing tie-up with available facilities like Skype will be decided depending on funds available for the portal. Concept behind availing this facility on our web portal is to support group communication such as, interaction between group of women at one end and expert guiding on other end , we aim to arrange video conference between school going girls of rural schools and urban schools where this girls will share their experience of, living and difficulties with each other.

II. SURVEY

Before stating the concept of web portal we conducted a baseline survey, in the slum area named diprapra to learn if women are really interested in being part of such communication and if they are having access to mobile phones.. This area is at 1027.4 meter from city and it is located along the road with area 10.6ha . Diprapra includes 274 houses and 1701 persons. It is slum on private land without individual ownership rights. The findings of the survey was as follows:

Age group	Total participants	Interested in communication	Have Access to cellphone
18-25	35	30	28
25-40	50	40	42
40-80	30	20	10
Table 2. Findings of (rural) women survey			



This survey concluded that,

- 1) Rural woman is interested in clarifying her doubts.
- 2) Most of them have access to mobile phone in their home though they own it their self.
- 3) Technology attract women , just lack of knowledge limits them from using it.
- 4) Now a days women seem to be partners in earning and may not find time to ask or answer frequently but for most of them once a month is not impossible.

III. PROPOSED FRAMEWORK

The first step is to properly assess the status and condition of women, before deciding ways to help them. Through question answer forum and video conferencing, activity researchers will come to know the current needs of a rural women exactly. This website will act as resource for research. Question answer forum will have sections such as health, security, women empowerment policies, child related issues ,situational questions, food related, travel related ,beauty or fashion related and so on.

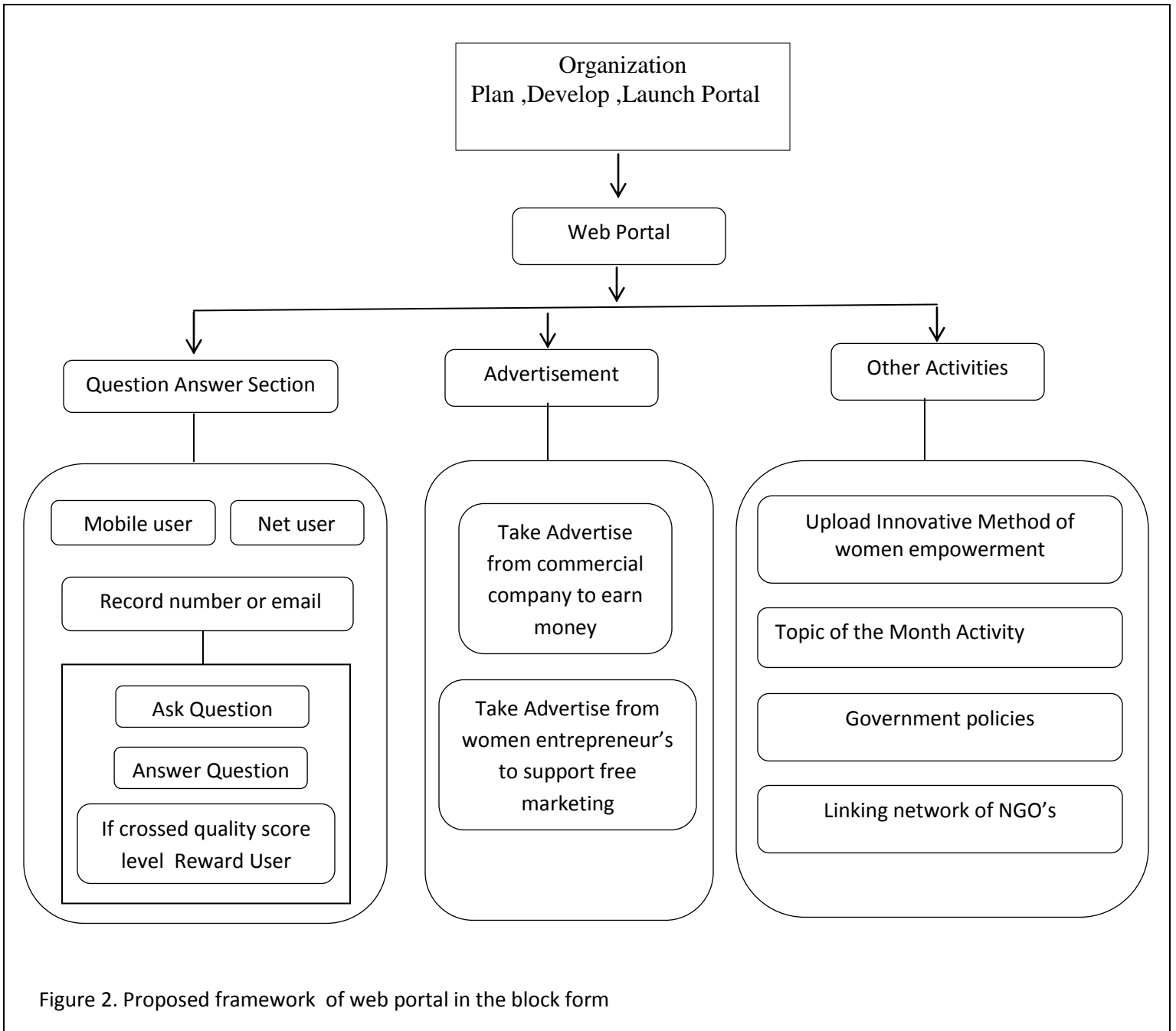
Every month one subject will be chosen as topic of the month and separate page will be dedicated for that topic. All initial discussion about selected topic will be extracted on that page and portal will extract current discussion and activities on that topic from other sites too. Topic will be open for discussion and innovative ideas may be placed. This will act as a platform to search and analyze flaws in the current system.

Notifications about vacancy for women with low or no education. job ads may be sent through message to the ones who are interested. There will be space for advertising products developed by both, commercial as well as rural women entrepreneurs. Ngo's working on the women empowerment issue will be able to place their link and can appeal for donations.

Web portal will challenge some creative minds to come up with the ideas for street plays and 'kirtan' which is oldest way of enlightening people and hence users can make money by uploading such contents on our portal. We will appeal through our network to interested mob to present act in their locality

IV. INFORMATION STRUCTURE AND INTERACTION DESIGN

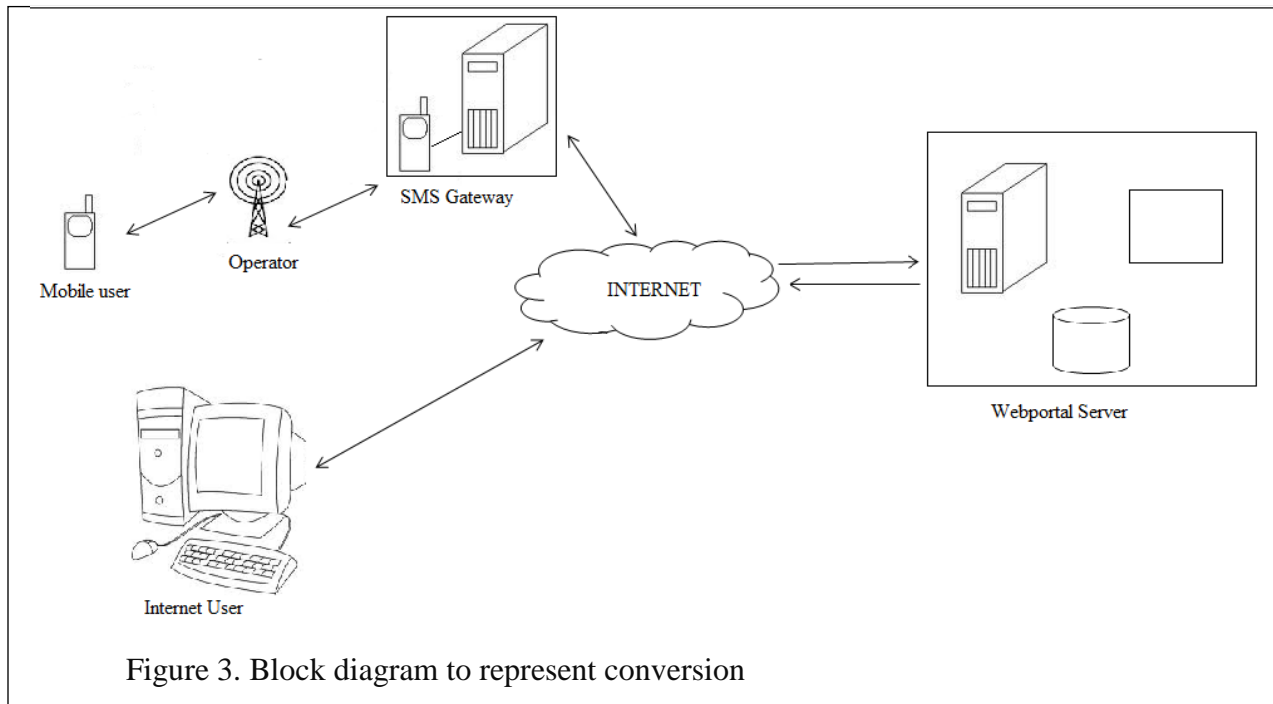
Web portal will deal with huge amount of information, which will of comprise phone numbers and email ids of participating users , advertisements and user wise skill set entries, whole lot of information on question answer forum and more. To ensure this web portal should support well-built database for organizing the information properly. Considering rural and urban women as primary user one more area of concern will be the design of web portal. This web portal should simple and uncomplicated as person from any profession and background should find it familiar to access.



V. E-USER AND M-USERS INTEGRATION THROUGH CONVERTORS

Through use of SMS gateways and built in API's that support web based text messaging, any website can send and receive text messages. Using HTTP API, your PC can deliver SMS. Cost to send and receive message on user end will depend on the organization whether private/semiprivate/ government.

Web portal will support (IVRS) Interactive Voice Response System. IVRS is a fully automated service that runs according to customized patterns and needs. It will be used to register or respond to their query.



VI. FINANCIAL ISSUES

To lure even the busiest people into helping we propose that web portal must pay back to these end users who will spend most of the time answering the queries voluntarily.

- 1) The web portal may run ads served by Google AdSense and generate revenue through users those who clicks on the advertisements. However, Web portal will share their revenue with its users. Users who will provide high-quality answers can earn a share of the advertisement revenues generated by the website. When a user will post an answer to a question, portal will analyze the answer through a proprietary algorithm that assigns the answer a Quality Score .
- 2) There are services that will pay you money to run a small survey or poll on your website also email lists and newsletters represent one of the most powerful marketing and money making tools on the Internet.

VII. TECHNIQUES FOR PROMOTION OF WEB PORTAL

Communication of ideas and knowledge will be best achieved if contributors from various background and professions will participate and to achieve that proper publicity has to be done. Building a network of database between available government portals to reach till already connected community.

Another technique of promotion is facility to answer questions through email or social networking sites. After considering the number of followers this websites have , providing such kind of facility will improve the number of participants and possibility of getting plenty answers will increase, indirectly increasing the possibility of providing solution for the problem.

VIII. CONCLUSION & FUTURE SCOPE

The potential of ICT tools varies widely in reaching rural women. There is no ideal ICT that fits all situations. In the design framework countless further facilities can be incorporated, we are suggesting few out of them

- 1) Mobile application which can run on simplest phone: We can design text based internet mobile applications which can easily run on simplest available phone in the market, this application will enable its user to register them on the main web portal, which in turn will be linked to social networking websites like facebook & twitter
- 2) Audio calls: User can request for a verbal interaction with an expert counterpart for more comprehensive solution to her queries related to different fields of interest like health, education & career etc.
- 3) Audio-text converter with Language Interpreter: The language interpreter will translate it into English language which in turn will be converted in text through audio-text converter

Need of superior solutions for the problems faced by women all over the world cutting across the ethnic, cultural, geographical or linguistic differences that separates them is realized. We hope more and more could join us to celebrate and recognize the life, spirit, contributions and aspirations of womanhood.

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