

Enabling Girls to Continue Education: An ICT Based Intervention Study for the School Going Girls

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ABSTRACT

Education is the most effective tool for women's empowerment. According to Census of India 2011, the literacy rate is 74.04%, with a large gap in male (82.14%) and female (65.46%) literacy rates. Similarly, in Rajasthan, the gender gap in literacy is 27.81%, with male literacy rate being (80.51%) and that of females at (52.7%). In order to promote education among girls, an action research was conducted to generate awareness and enhance knowledge among school-going girls about the state supported schemes for girl child education. The study was carried out in Kotputli town and village Narhera of Jaipur district in Rajasthan. Sixty girls from government schools studying in class IX were shown specially prepared animated videos giving important information about seven such schemes. The findings indicated that the animated videos were very effective in generating interest and providing complete information to the students, making it possible for them to avail their benefits in future. The app, developed as a resource for future, has also been downloaded by more than a thousand number people so far, indicating that such efforts need to be scaled up to reach out to all eligible girls.

Keywords: *Girls' education, ICTs for Development, Gender gap in literacy, Government schemes, Schemes for Girls education*

“Education is the most powerful weapon which you can use to change the world”

-Nelson Mandela

Background

Education for girls and women is the single most effective way to improve the lives of individual families as well as to bring economic development to poor communities worldwide. The need for women education is also informed by the fact that purposeful occupational achievement and satisfaction is ensured by deep self-awareness and understanding, which can only be achieved through the provision of effective and functional education and guidance & counseling. Enhancing women's participation in development can be brought by enhancing

educational opportunities (Ahamad, Narayana, 2015).

Education of women means providing them greater power enabling them to make indisputable choices over the kinds of lives they seek to live. Education leads them towards a happier and healthier life. Numerous studies shows that illiterate women have high levels of fertility and mortality, poor nutritional status, low earning potential and little autonomy in households (Kuldeep, 2016). An educated woman can not only promote education of girl children, but can also provide better guidance to

all children. She can also help in reducing infant mortality rate and growth of population.

India ranks 131 in Human Development Report out of 188 countries, according to the United Nations Development Programme, 2017. Education is a universal right. It empowers girls by helping them achieve other basic human rights- a spiral of power in their lives, grounded in education. However, beyond their attainment of individual rights, girls' education has also proven to be a remarkably effective catalyst for social development and economic growth. Therefore, it can be said that, in some sense, it is not only the individual girl who is empowered, but also the entire society (UNICEF, 2007).

Investing in women's economic empowerment sets a direct path towards gender equality, poverty eradication and inclusive economic growth (UN Women). The education can provide women an opportunity to develop and enhance her economic status, which can lead to higher GDP of a country. The SDGs work in the spirit of partnership and pragmatism to make the right choices to improve life, in a sustainable way, for future generations. They provide clear guidelines and targets for all countries to adopt in accordance with their own priorities and the environmental challenges of the world at large (United Nations Development Programme, 2018). There are 17 SDGs aimed at holistic development and at ending poverty, protecting the planet and ensuring that all people enjoy peace and prosperity. Goal 4 i.e. Ensure inclusive and quality education for all and promote lifelong learning works towards obtaining a quality education for improving people's lives and sustainable development. The target set for the attainment of the goal is to ensure that all girls and boys complete free, equitable and quality primary and secondary education, leading to relevant and effective learning outcomes by the year 2030. (United Nations Development Programme, 2017).

There is an inter-state gender gap between literacy rates of males and females, especially in the Hindi speaking belt that includes Bihar, Rajasthan, Madhya Pradesh and Uttar Pradesh, which have a female literacy rate of less than 57%. Among these states, the state of Rajasthan is combating with the twin issues of a skewed gender ratio in school enrollment and a high school dropout rate of girls (Choudhary, 2017).

The positive aspect of literacy rate is that it is increasing steadily after independence. However, a trend of decline in gender gap in literacy is visible after 1981. The government interventions and efforts of various organisations of the society have made this possible.

Education can lead to increased participation of women in the market labour force and can help in widening the tax base as well. Gender inequality in education directly affects growth resulting in low level of human capital. Lagerlof (1999) and Weil (1996) examined the links between gender inequalities in education on fertility and economic growth. Lagerlof showed that initial gender inequality in education can result in high fertility, low economic growth, continued inequality in education, thus, creating a poverty trap.

In addition to these, it has been well established that illiteracy in women increases infant mortality rate and fertility rate, decrease in life expectancy, increase in poverty and inequality that adversely affect democratic values, human rights and political stability. Education of women means providing them greater power; enabling them to make indisputable choices over the kinds of lives they seek to live. Education leads them towards a happier and healthier life. Eric Hanushek in *Schooling, Gender, Equity and Economic Outcomes* says, "Women's education not only triggers economic growth but also increases the equitability of the distribution of wealth in a society. Girls' education plays an important role in the overall development of the country. An educated woman can not only

promote education of girl children, but can also provide better guidance to all children. She can also help in reducing infant mortality rate and

growth of population. There are several benefits for educating women, which include enhanced economic participation and development.”

Table 1.1: State wise literacy rate (%) with gender gaps (GG)

Source: Office of registrar General, India

State	1991	2001	2011						
	Female Male GG	Female Male GG	Female Male GG						
Andhra Pradesh	32.7	55.1	22.4	50.4	70.3	19.9	59.1	74.9	15.7
Arunachal Pradesh	29.7	51.5	21.8	43.5	63.8	20.3	57.7	72.6	14.9
Bihar	22.0	51.4	29.4	33.1	59.7	26.6	51.5	71.2	19.7
Chhattisgarh	27.5	58.1	30.6	51.9	77.4	25.5	60.2	80.3	20.0
Delhi	67.0	82.0	15.0	74.7	87.3	12.6	80.8	90.9	10.2
Gujarat	48.6	73.1	24.5	58.6	80.5	21.9	69.7	85.8	16.1
Himachal Pradesh	52.1	75.4	23.3	67.4	85.4	18.0	75.9	89.5	13.6
Karnataka	44.3	67.3	23.0	56.9	76.1	19.2	68.1	82.5	14.4
Kerala	86.1	93.6	7.5	87.9	94.2	6.3	92.1	96.1	4.0
Madhya Pradesh	29.4	58.5	29.1	50.3	76.1	25.8	59.2	78.7	19.5
Odisha	34.7	63.1	28.4	50.5	75.4	24.9	64.0	81.6	17.6
Rajasthan	20.4	55.0	34.6	43.9	75.7	31.9	52.1	79.2	27.1
Uttar Pradesh	24.4	54.8	30.4	42.2	68.8	26.6	57.2	77.3	20.1
Goa	67.1	83.6	16.5	75.4	88.4	13.0	84.4	92.6	8.2
West Bengal	46.6	67.8	21.2	59.6	77.0	17.4	70.5	81.7	11.2
Mizoram	78.6	85.6	7.0	86.8	90.7	3.9	89.3	93.3	4.0
India	39.3	64.1	24.8	53.7	75.3	21.6	65.5	82.1	16.3

Investing in women’s economic empowerment sets a direct path towards gender equality, poverty eradication and inclusive economic growth and leads to higher GDP of a country. It also has a multiplier effect since education permeates into areas that are beyond learning, extending a positive influence in all the areas of women as well as in the lives of people surrounded by her. The idea of education and educating people around women passes on from generation to generation.

The education of girls should receive emphasis, not only on the ground of social justice, but also because it accelerates social transformation

(National Policy on Education, 1968). Numerous studies shows that illiterate women have high levels of fertility and mortality, poor nutritional status, low earning potential and little autonomy in households (Kuldeep, 2016).

However, many girls drop out of school and this reality needs to be understood better and addressed appropriately. Parent’s perception plays an important role in girls’ attainment of education. Due to various government interventions in the field of elementary education, girls have been able to perform well during their elementary education. However, when it comes to secondary education, the

situation is not satisfactory. Parents in rural areas do not want their daughters to study and assume that education has nothing to do with their future. According to them, the primary and the foremost job for a girl is to get married and be a good housewife, while getting an education, job and money is the responsibility of boys.

Economic factors are also instrumental in depriving children of education. In India, elementary education is provided free of cost to children. The parents are not financially burdened as books, uniform, mid-day meals are provided in the schools to students without any charges. However, in secondary education, parents have to bear the cost of education. Girls are assumed to be '*paraya dhan*' and an investment in girls' education is wastage to parents as their education would not benefit them or their life after marriage. On the other hand, this is not the case with boys. Their education is linked with long-term benefits as boys are considered to be the only heir of the family as well as the support of parents in old-age. Girls are often forced to study the subjects they do not prefer to study. On the assumption that they are weak, they are forced to study the subjects which are considered appropriate for girls' like Home Science and generally courses offered under Humanities stream in schools and colleges. On the other hand, boys are considered to be hardworking and intelligent and are given subjects like Science and Mathematics to study (Awasthi, 2016).

To overcome these socio-economic and cultural barriers to girls' education, Conditional Cash Transfer (CCTs) can be expected to make a meaningful difference. These schemes were introduced generally in response to India's commitment to achieve MDGs. The Millennium Development Goals (MDGs) were ambitious targets aimed at ensuring universal primary education, reducing poverty, combating infectious diseases and promoting gender equality in the world (2000). The MDGs were replaced by SDGs in the year 2015 by United

Nations Development Programme. Earlier the MDGs had catalysed action at the national and international level to unprecedented heights and fostered the use of innovative approaches that helped to lift millions of people out of poverty, saved lives and ensured that children attend school, expanded opportunities for women, increased access to clean water and freed many people from diseases (United Nations, 2011). One such approach was that of the use of conditional cash transfer programs (CCTs) (Kornacki, 2005).

In order to improve the survival and welfare of girls and to reverse the distorted sex ratio at birth, both national and state governments have launched special financial incentive schemes for girls. CCTs seek to provide short-term income support and promote long-term behavioural changes. They, therefore, have the potential to become an effective means of channelising the limited resources to the poor and socially disadvantaged sections, more specifically to girls and women. In India, the girl child is at a disadvantage and faces persisting gender inequalities and discrimination at every stage of her life, beginning with sex selection, infanticide, little or no access to education, lack of healthcare and nutrition, child marriage, and teenage pregnancy. The conditionality linked cash transfers attempts to correct such discrimination. These programmes represented a shift in the government's approach of focusing on the supply side to a more demand-driven approach (Asadullah & Chaudhury, 2009).

This study is aimed at enhancing awareness about the schemes promoting girl child education in the state of Rajasthan by developing seven animated videos that provide information about the beneficiary schemes. The study was carried out in Kotputli town and village Narhera of Jaipur district in Rajasthan. The literacy rate among the Indian population is 74.04%, out of which male literacy rate is 82.14% and female literacy rate is 65.46%. However, the literacy rate in Rajasthan is much lower than the national

average. It is 67.1%, with male literacy as 80.51% and female literacy rate as 52.7%, with a gender difference of 27.81%, and hence, these places were chosen as the locale of the study.

Some of the Conditional Cash Transfer Schemes adopted by the Rajasthan State Government are-

- *Aapki Beti Yojna*
- *Aarthik Sabalta Puraskar*
- *Balikao ko Krishi Sankay mei Addhyan hetu protsahan Yojna*
- *Balika Protsahan Yojna*
- *Gargi Puraskar Yojna*
- *Gramin Balika Transport Voucher Yojana*
- *Mukhyamantari Hamari Beti Yojna*
- *Pannadhaya Jeevan Amrit Yojna*
- *Rajiv Gandhi Vidyarthi Digital Yojna*
- *Vidyarthi Suraksha Bima Yojna*

(Rajasthan Government Portal. समस्त विभागों की योजनाएँ)

These are some schemes that provide economic support as well as material incentives to the girl students of the government schools in the state. The schemes selected for the study were- *Aapki Beti Yojna*, *Aarthik Sabalta Puraskar*, *Balikao ko Krishi Sankay mei Addhyan hetu protsahan Yojna*, *Balika Protsahan Yojna*, *Gargi Puraskar Yojna*, *Gramin Balika Transport Voucher Yojana* and *Mukhyamantari Hamari Beti Yojna*.

Diffusion of an Innovation

According to Everett Rogers model of Diffusion of Innovation and New Ideas, awareness is the first step in adoption of new behaviour. It is imperative that the information about the existence of such schemes and the provisions available are made known to the people who will benefit from such schemes. However, it has been realised that the enrollment rates under the schemes remained low due to ignorance among parents and the young girls otherwise eligible to avail the benefits of these schemes.

Entertainment-education seeks to capitalise on the popular appeal of entertainment media to show individuals how they can live safer, healthier, and happier lives (Piotrow, Kincaid, Rimon, & Rinehart, 1997; Singhal & Brown, 1996).

The videos are a medium of Entertainment Education (E-E). E-E is the process of purposely designing and implementing a media message to both entertain and educate, in order to increase audience member's knowledge about an educational issue, create favourable attitudes, shift social norms, and change overt behaviour (Singhal & Rogers, 1999; Singhal & Rogers, 2002).

According to Edgar Dale's cone of experience, videos can be an effective medium to disseminate the information to people. People generally remember 10 percent of what they read, 20 percent of what they hear, 30 percent of what they see, 50 percent of what they hear and see, 70 percent of what they say or write and 90 percent of what they say as they do something. (Khanna, A., Dhanda, K, Kumar, A., and Singh, A. 2016).

Awareness is the first step towards the adoption of new behaviour. Active awareness can lead to interest generation in people and can guide them to make appropriate decisions to try out the new behaviour, so that it can be either adopted or rejected. Videos as a medium of E-E can help to create curiosity among people to watch them and be informed in a fun way avoiding the conventional method of information giving. As the Edgar Dale's cone of learning suggests, people generally remember 50 percent of what they hear and see, videos, therefore, become an effective tool to circulate the information at large among people and can be helpful to retain the information for a longer period of time.

The respondents in the study were the students of class-IX and the teachers involved in the implementing and maintaining of documents of the schemes. The aim was to understand the need

for imparting information about the schemes and the common concerns of the students and teachers in optimally utilising the scheme and increasing enrolments. The parents of the students were also included in the study in order to understand their perspective about the process of application and challenges faced (if any). The study conducted interviews with teachers and parents of the selected students during the course of the study.

The study consisted of all 60 girls studying in Class- IX from 2 (two) government schools, namely- School 1- *Lakshmi Chand Gyanvati Devi Savaika Raajkiye Baalika uchh Madhyamik Vidyalaya*, which was located in the heart of the Kotputli town and School-2 *Rajikye Baalika Maadhyamik Vidyalaya*, which was situated at the periphery of the town in the village Narhera, in Jaipur district. Students of class-IX were selected because the students of class-IX were the primary beneficiaries of the majority of these schemes. Only the first thirty girls in a class, as per the attendance record, were selected for the study.

The study was conducted in 4 (four) phases, that is the assessment of information needs, development of intervention tools (animated videos and designing an android mobile phone application), followed by implementation of the planned intervention, and finally, assessment of gain in knowledge. In phase-1, interaction sessions were conducted with school teachers and management as well as the government officials of education department to understand the current scenario of enrollment and their limitations while implementing and availing the policies in town. In phase-2, 7 (seven) animated videos and a mobile phone application were developed, providing information about the schemes promoting education along with an android based mobile phone application. In phase-3, implementation of the planned intervention was done, wherein pre-testing was done to assess the knowledge level of girls about

the schemes. In phase-4, gain in knowledge was assessed after the intervention.

Awareness about the available schemes for girl child education

The findings revealed that all the respondents were aware that there were schemes available promoting education for girls in the state. However, they did not know the details of the specific schemes available and the incentives provided under them. The most popular scheme among the students was Nishulk Cycle Vitran Yojna as every student of class-IX had their own bicycle that they were able to use to come to school. On further probing, it was revealed that students from school-1 had to travel to a nearby school i.e. Sardar School to collect their bicycles. Whereas, students of school-2 had to submit Rs.50 as transportation charges for the truck that brought their bicycles to school. Due to the geographical location of the school (at the outskirts of the town), the cycles were transported to the school directly. Wagner (2010) in his study 'The effect of the use of video texts on ESL (English as second language) listening test-taker performance' reported that the visual components of spoken texts were useful to the listeners to retain and envision the aural information. The present study findings also revealed a similar pattern, wherein most of the students were able to understand the finer details of all the schemes for which they were eligible and would be able to avail the benefits in due course of time.

The pattern of marital status of girls in both the schools under study also remained similar to (90.00%) of them being unmarried and (10.00%) being married. Despite the fact that there has been a decline in child marriage across the country, the Census of India (2011) reveals that state of Rajasthan tops the list in the incidence of child marriages in the country, with (2.5%) of girls marrying before the legal age. However, the custom of 'gauna' exists, wherein the girls married at younger ages continue to live with

their natal families till they attain menarche and are then sent off to their marital families. In the present study as well, the married girls claimed that they were able to complete their studies as they were living with their natal families.

Majority of the respondents in the study belonged to the OBC category i.e. (58.34%), followed by SC category i.e. (20.00%), then General category i.e. (16.66%), and at last, ST category i.e. (05.00%). However, there was a difference in caste distribution between the two schools. The school situated in the heart of the town had majority of girls who belonged to the OBC category i.e. (76.66%), and in school-2 which was situated at the periphery of the town in the village Narhera, the number of girls from SC and ST families was higher than the girls from school-1 i.e. (30.00%) and (06.67%), respectively indicating that SC/ST families were still living at the margins of the town and that OBCs lived in the heart of the town.

Perception about education and future aspirations

The girls had very limited exposure, but they still wanted to be financially independent. It was thought to be important to ask these students about their perceptions of education because that gives them opportunities to think and exposes them to the outer world. It also helps to understand their plight and the kind of resources they have. The findings indicated that while they may not be too confident to pursue a job, education could give them an opportunity to be financially independent and be successful in life.

The study revealed that (40.00%) of the respondent girls wanted to be police officers. However, there was difference in the future aspirations among the students of two schools. The difference was due to the availability of subjects and teachers. In school-1 which was situated in the heart of the town, there was more number of teachers available than in school-2. In order to achieve their dreams, every respondent from the study agreed on the fact that they would

require financial help to complete their schooling. It was due to the socio-economic background they belonged to. Majority of the students belonged to families where their parents were engaged in either farming practices or were daily wage earners under the MGNREGA scheme. It was very difficult for their parents to manage the expenses. To be able to cater to their educational needs and demands, they needed financial help.

Animated videos and the mobile application

(98.34%) of the respondents were interested in watching the videos which provided information about the schemes. Sultana Yeasmin, 2016, in her study “Effectiveness of using technology supportive materials for developing listening skills among school children” said that the use of technology-supportive materials over usual learning methods is more effective for developing effective listening skills and could be a great medium to disseminate the information at large. Thus, it can be said that the intervention triggered the need to learn more among the students as the information provided to them was relevant to them. The videos were useful in opening their minds to other lucrative options available for them.

The students were curious to know about different schemes. It was noticed that (15.00%) of the respondents were keen to know about new schemes available to them. *Palanhar Yojna* was the most popular scheme as students were keen to know more about it. It is a scheme that is useful for both girls and boys whose parents are either dead or are suffering from incurable diseases. The enrolment for this scheme is not provided by the schools. The candidates can enroll themselves for this scheme online or via e-mitra stations.

Teachers' and Parents' perception about need of imparting knowledge about schemes and the challenges faced by them

The interactions with teachers disclosed that for them the most tedious task of documentation of

schemes was that they had to keep records that were time consuming. According to them, the parents should be more vigilant towards their daughter's future so that they could avail the maximum benefits from the scheme.

Due to non-availability of parents, only one mother could be interviewed. The interaction with her led to the discovery that she had visited her daughter's school for the first time in her life as she never had time to visit the school. Being a single parent (widow), she was always busy with home and business (shop) which was her only source of income. On further probing, it was revealed that she had knowledge about the availability of schemes for girls but did not know the names of the schemes under which her daughter was enrolled. Most of the parents were enrolled under MGNREGA scheme, which left them with very little time to interact with their children. Due to lack of money, the parents were unable to enroll their daughters under beneficiary schemes, even if they wanted to enroll them.

Through the interaction with teachers and parents, it can be said that both of them had their own problems and limitations. It was very difficult for one teacher to collect the documents for 40-50 students alone, as the process of documentation requires time and energy. Despite the fact that the students were given a period of 10 days for collecting the documents, the students were often unable to collect the

documents on time and the lack of meeting the timeliness by students often created problems for teachers.

Conclusion

The study clearly outlines the successful use of audio-visual methods in the information dissemination process. The study showed that innovative methods, when used in school for information-giving process, can trigger the need to learn more among the students. The videos were useful in opening their minds to other lucrative options available for them because the information provided to them was relevant to them. The study also showcased that despite limited exposure and opportunities available to girls, they still wanted to be successful in life and be financially independent.

The planned intervention helped the students to gain knowledge about the various schemes available for them and tried to make them self-aware of their rights as citizens of India. At present, the mobile application-Rajasthan Sarkar ki Yojna has been downloaded by thousands of people so far and has been shared by people through different platforms as a potential application for providing information to people in a fun and non-threatening way, indicating that such efforts need to be scaled up to reach out to all eligible girls. Thus, it can be said that the intervention had been a success and it has become a potential medium for disseminating information about the schemes.

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