

Original Research Article

Rural Youth's Knowledge Regarding E-Learning

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A B S T R A C T

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This study focussed on the rural youth's knowledge and awareness of e-learning. Study was undertaken in Udaipur district of Rajasthan that included 70 male and 70 female respondents. The results revealed that about 70 per cent of the respondents' mothers were illiterate and about 34.29 per cent respondents' fathers were educated up to primary level and secondary level (20%). In spite of this almost all the respondents (100%) knew about e-learning and most of them (99.28 %) accessed e-learning. Further it was found that most of the rural youth (97.86%) had average extent of knowledge about e-learning with 46.80MPS and rest (2.14%) had poor knowledge about it.

Introduction

With the outburst of covid-19 pandemic almost every sector has been badly hampered and affected. Education system is one of the segments that have been equally affected in India and across world. In an attempt to control the spread of the pandemic the government have decided to completely shut down the schools, colleges and universities. As of 30 September 2020, nearly 1.077 billion students and learners are severely suffering because of this lockdown. According to UNICEF monitoring, 53 countries are currently implementing nationwide closures and 27 are implementing local closures, impacting about 61.6 per cent of the world's student population. UNESCO reported that globally 290 million school students affected due to stay away from school. The crude reality is that this complete

or partial lockdown has replaced the traditional chalk and board method completely. Almost all the government and private schools adopted the computer and internet based teaching learning method. This method is commonly known as e-learning which comprises all forms of electronically supported learning and teaching. The information and communication systems, whether networked or not, serve as specific media to implement the learning process (Tavangarian *et al.*, 2004).

The main attribute of e-learning is the flexibility and use of information and resources at any time, place or pace according to one's convenience. Learners do not have to be physically present at the location or school. Another attribute is access of multimedia based resources; that means

different type of media like text, audio, video, animation, graphics and pictures will be supported by the network and communication technology, which provide effortless accessing of information. Technical requirement for e-learning are the collection of entities (hardware and software) that are designed to receive process, manage and present information in meaningful formats. Computer hardware comprises of all the physical and tangible components of a computer, such as the monitor, keyboard, computer data storage, graphic card, sound card, speakers central processing unit and motherboard. On the contrary, softwares are the instructions that can be stored and run by hardware. Various hardware that makes e-learning possible are mobile devices such as smart phone, ipad, iphones and multimedia phone. Other supporting hardware are CD/DVD these discs have standardised storage size and can store lots of e-learning material like text, audio, video, graphics and pictures, Audio and video tape, modem and smart classroom. Smart classrooms are technology enhanced classrooms that foster opportunities for teaching and learning by integrating learning technology, such as computers, projector, specialized software, audience response technology, listening devices, networking, and audio/visual capabilities. Classroom Services supports, designs and help in planning for making campus spaces more learning oriented and sophisticated.

India is a country that has world's largest youth population with 365 million youth population falling in age between 15-24 years (UN, Population Facts, 2015). So, a major portion of the population has suffered because of this shut down. Although initiation of the online classes has made the teaching learning process easier and convenient for a few but still many are facing problems in accommodating with the new

system. Most of these issues are with the students from rural area who do not even know much about this entire process. As connectivity, lack of infrastructure, poverty etc. play a key role. But most important aspect is the knowledge about an emerging method of teaching learning. This study was designed to analyse the knowledge of the rural youth about various aspects and components of e-learning.

Materials and Methods

This study was undertaken in the seven randomly selected government school of Udaipur district of Rajasthan. Badgaon Panchayat samiti of Udaipur district was purposively selected to make a sample of randomly selected 140 rural youth (70 male and 70 female). The required information was extracted from the respondents using a questionnaire.

Procedure of data collection

The data was collected using questionnaire consisted the questions regarding information about respondents' knowledge regarding concept of e-learning, its tools, uses and advantages, purpose of use, various e-learning apps, websites and government initiatives for promoting e-learning. The information was personally collected from the respondents using the questionnaire.

Statistical analysis

Frequency and Percentage: This was used to analyse the data regarding background information and availability of internet.

Mean Per cent Scores (MPS): MPS were calculated to compare the extent of knowledge about e-learning among male and female respondents.

Mean Per cent score =

$$\frac{\text{Total score of the respondents}}{\text{Maximum score}} \times 100$$

Categories of extent of knowledge and score range (MPS)

S No.	Extent	Mean Per cent Score
a)	Poor	0-33.3
b)	Average	33.4-66.6
c)	Good	66.7-100

Results and Discussions

Background information

Table 1 reveals that 93.57 per cent respondents were using internet. It is important to note that 87.14 per cent of the girls were using internet and on the contrary all the boys (100%) were using internet. Table further shows that majority of the respondents (87.85%) used internet on their smart phones which makes e-learning more portable and easy to use.

Knowledge of rural youth about e-learning

Use of any new technology is possible only if the end users are aware and possess adequate knowledge about it. Knowledge is a familiarity, awareness, or understanding of something, such as facts, information, descriptions which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can also be referred to a theoretical or practical understanding of a subject. Here, knowledge was measured by way of eliciting responses to various open ended question regarding concept of e-learning, purpose of various e-learning tools, e-learning apps, websites and initiatives by government.

Concept, benefits and limitation of e-learning

E-learning is defined as learning through various electronic technologies and internet. It is mainly learning that is delivered online, via the internet, ranging from distance education, to computerized learning. Sometimes it is delivered live; where learner can interact in real time and sometimes it is a lecture that has been pre-recorded.

Perusal of Table 2 depicts that majority of the respondents had clear concepts about e-learning and they stated that "e-learning is learning via smart phones and laptops" (81.43%) and 69.29 per cent of the respondents knew that "e-learning is having live classes via internet". Half of the respondents (53.57%) knew that e-learning is learning at their own pace. More than half of the male youth (58.57%) knew that e-learning is learning through apps whereas only one fifth of females (21.43%) mentioned it. It is encouraging to mention that majority of the respondents knew about various e-learning tools and they listed few e-learning tools such as personal computer (69.29%), smart phone (90.71%), internet (84.29%), laptop (29.29%), smart classroom (71.43%), audio video tape (66.43%) and CD/DVD (65%). Similar findings were reported by Madhumita (2016) who revealed that majority of the respondents (96.67%) were aware of e-learning.

These days e-learning is being emphasised too much and being promoted because it has many benefits such as it is the efficient way of accessing courses online, it is convenient and flexible. The resources are available anywhere and at any time; it promotes active and independent learning. Video instruction that are available for audio or video learning can be rewind over and over again if one do not happen to understand the topic in first

round. The knowledge of respondents about benefits of e-learning was assessed which is presented in Table 2. The respondents mentioned that because of e-learning they can complete their test and assignments electronically (60.71%) and content is delivered fast (60.71%). Also 58.57 per cent of the respondents knew that e-learning has increased reach to worldwide content and 53.57 per cent respondents knew that “e-learning supplements classroom learning”. Less than half of the respondents knew about the benefits like e-learning it is flexible (41.43%), economic (22.86%), and eco-friendly (22.86%).

Every coin has a two side, e-learning has multiple benefits but there are few limitations also such as there is lack of face to face interaction, lack of motivation, many health issues can also be seen if electronic gadgets are accessed for. Regarding limitations of the e-learning, Table 2 depicts that two third of the respondents knew that it may lead to some health issues (66.43%). Respondents also knew about lack of face to face interaction (57.14%), lack of access to technology (61.43%), chances of distraction (65.71%) and lack of motivation (65.71%).

E-learning apps

App is an acronym for "Application" which refers to a program for any hardware platform which is most often used to describe programs for mobile devices, such as smartphones and tablets. Various e-learning apps are now available which can be downloaded from app store and can be installed in the device. Few of the popular e-learning apps are Diksha app, Dishari app, Swayam app and Disha app.

Diksha app offers teachers, students and parents engaging learning material relevant to the prescribed school curriculum. Teachers

have access to aids like lesson plans, worksheets and activities, to create enjoyable classroom experiences. Students understand concepts, revise lessons and do practice exercises. The unique QR codes in the text books can be scanned to access the detailed explanation. Dishari app is providing free learning material for the preparation of various competitive examinations and Swayam app is an application launched by Government of India designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched. Here learner can choose from hundreds of courses, virtually every course that is taught at the university / college / school level and these shall be offered by best of the teachers in India and elsewhere.

Table 3 shows the respondent's knowledge about various e-learning apps. Most of the respondents More than half of the respondents knew about Diksha app (63.57%). Similarly Dishari app and Swayam app were known to equal number to respondents (53.57%). A very few respondents (1.43%) had knowledge about e-sakhi and only one respondent knew about other apps such as NCERT book app which has all the course content of NCERT book, Ujaala app for reading and browsing latest and breaking news in Hindi and Disha app which is rich and pleasant e-learning experience. Smart phone and internet connection are the basic requirement for accessing any app. As Diksha, Dishari and Swayam apps are launched by the government and government is promoting the app so respondents might be aware about them. Ujaala app and Disha app were known to few of the respondents because of their

less promotion and respondents might not be interested in reading newspaper through Ujaala app.

Most of the respondents (85%) knew that various e-learning apps can be downloaded from Google play store. More than half of the respondents (52.14%) knew that QR code in the text books can be scanned through Diksha app to access various e-leaning materials. Free study material for competitive exams can be accessed from smart phones through Dishari app was known to 47.14 per cent of the respondents.

Findings are in line with the study conducted by Mithu and Das (2017) who reported that the respondents (76%) were aware of SWAYAM. More than half of the total respondents (52%) were interested to conduct course through Swayam. Most of the respondents (80%) were aware of e-PG Pathshala.

Websites and platforms

Websites are most certainly the powerful bridge between the students and these online courses as anything can be accessed in just one click. There are several websites which are aimed for certain group of people to provide them the information and updates regularly as per the requirement of that particular group. Few websites target students so those websites fall under educational websites where information is of their use. Various government websites have been launched to implement and manage various initiatives such as www.rbsc.com for educational material and model papers of Rajasthan Board of Secondary Education, rajasthan.gov.in for getting latest notification regarding education, employment, scholarships, and easy communication with the government officials, www.siksha.com for information about higher education in India and www.sarkarinaukri.com to browse

about various job offers in India. Table 4 shows respondents knowledge about various important websites. The respondents mentioned www.rbsc.gov.in (44.29%), www.scholarship.rajasthan.gov.in (20%), rajasthan.gov.in (12.14%), www.siksha.com (3.57%) and www.sarkarinaukridaily.in (2.86%) as the important websites. Majority of the respondents (76.43%) also knew that Facebook, YouTube (86.43%), Gmail (55%) and Whatsapp (79.29%) are various e-learning platforms.

Respondents were aware about various websites which might be due to the reason that now a days these sites play critical roles in the introducing and upgrading students about various educational programs launched by government for improving school education. These websites keep the students updated, notified and provide information regarding so many educationally important things to students and help them to enhance their studies. Many respondents also knew about YouTube as platform for e-learning because students understand and can remember the complex concepts much better when they are exposed to a visual explanation video.

Government initiatives for e-learning

As government is trying to reach the remote students many initiatives have been taken to digitise the education. Many of the projects are currently operational such as Utkarsh project which is a quiz based learning system. SWAYAM courses are available in different formats of video lecture, reading material that can be easily downloaded, self-assessment tests and quizzes and an online discussion for doubts. Another government initiative is E-gyan Kendra, it supports digital learning and community empowerment. Table 5 shows the knowledge of the respondents regarding initiatives by government for e-learning.

Table.1 General information of the respondents regarding internet use and e-learning

S No.	Items	Male (n ₁ = 70) %	Female (n ₂ = 70) %	Total (n=140) %
a)	Use of internet	100.0	87.14	93.57
b)	Internet access by smart phone	94.28	81.42	87.85
c)	Internet access			
i.	Independently	77.14	75.71	76.42
ii.	With sibling	22.85	20.00	21.42
iii.	With parents	0.00	4.28	2.14

Table.2 Percentage distribution of the respondents on the basis of knowledge about concept, benefits and limitations of e-learning

S No.	Items	Male (n ₁ = 70)	Female (n ₂ = 70)	Total (n=140)
1. Concept				
a)	Having live classes via internet	67.14	71.43	69.29
b)	Learning through apps	58.57	21.43	40.00
c)	Learning via smart phone	90.00	72.86	81.43
d)	Learning via computer/laptop	87.14	75.71	81.43
e)	Learning at your own pace	55.71	51.43	53.57
f)	Watching pre-recorded videos	27.14	35.71	31.43
2. Tools				
a)	Personal computer	64.29	74.29	69.29
b)	Laptop	32.86	25.71	29.29
c)	Smart phone	88.57	92.86	90.71
d)	Internet	84.29	84.29	84.29
e)	Smart classroom	74.29	68.57	71.43
f)	audio-and videotape	75.71	57.14	66.43
g)	CD/DVD	72.86	57.14	65.00
h)	TV	34.29	68.57	51.43
3. Benefits				
a)	Test and assignments completed electronically	46	65.71	39
b)	Supplements classroom learning	48	68.57	27
c)	Increased reach to worldwide content	44	62.86	38
d)	Fast delivery of content	46	65.71	39
e)	Economic	34	48.57	34
f)	Flexibility	33	47.14	25
g)	Eco-friendly	18	25.71	14
4. Limitations				
a)	Lack of motivation	49	70.00	43
b)	Less face to face interaction	50	71.43	30
c)	Lack access to technology	56	80.00	30
d)	Health issues	49	70.00	44
e)	Chances of distraction	57	81.43	35

Table.3 Percentage distribution of the respondents by their knowledge about e-learning apps

S No.	Category	Male (n ₁ =70)	Female (n ₂ =70)	Total (n=140)
a)	Diksha app	52.86	74.29	63.57
b)	Dishari app	42.86	64.29	53.57
c)	Swayam app	42.86	64.29	53.57
d)	E-sakhi	0.00	2.86	1.43
e)	NCERT book app	0.00	1.43	0.71
f)	Disha app	0.00	1.43	0.71
g)	Ujaala app	0.00	1.43	0.71
h)	Download e-learning apps	87.14	82.86	85.00
i)	App to scan QR code	44.29	60.00	52.14
j)	App for free study material for competitive exam	47.14	47.14	47.14

Table.4 Percentage distribution of respondents by their knowledge regarding websites for e-learning

S No.	Items	Male (n ₁ =70)	Female (n ₂ =70)	Total (n=140)
1.	Websites			
a)	www.rbsc.gov.in	61.43	27.14	44.29
b)	www.google.com	28.57	38.57	33.57
c)	www.scholarship.rajasthan.gov.in	38.57	1.43	20.00
d)	rajasthan.gov.in	0.00	24.29	12.14
e)	www.naukri.com	2.86	12.86	7.86
f)	www.yahoo.com	11.43	0.00	5.71
g)	www.instagram.com	4.29	4.29	4.29
h)	www.siksha.com	0.00	7.14	3.57
i)	www.sarkarinaukridaily.in	5.71	0.00	2.86
2.	Platforms			
a)	Facebook	84.29	68.57	76.43
b)	YouTube	85.71	87.14	86.43
c)	Gmail	71.43	38.57	55.00
d)	Instagram	81.43	64.29	72.86
e)	Whatsapp	85.71	72.86	79.29

Table.5 Percentage distribution of the respondents by their knowledge regarding government's initiatives for e-learning

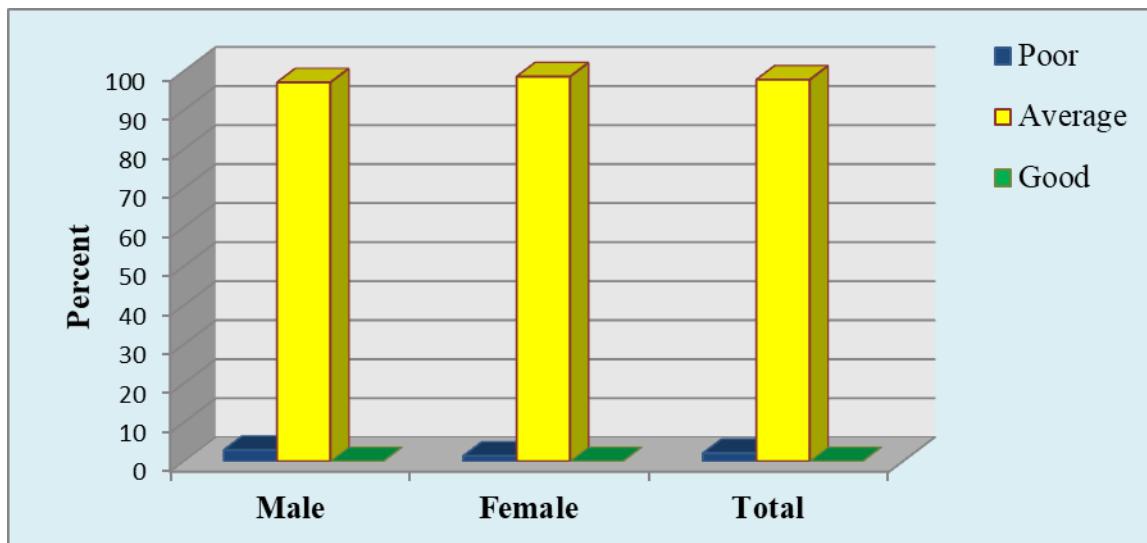
S No.	Items	Male (n ₁ =70)	Female (n ₂ =70)	Total (n=140)
a)	Utkarsh project	40.00	64.29	52.14
b)	E-gyankendra	15.71	41.43	28.57
c)	SWAYAM Project	0.00	47.14	23.57
d)	E-learning kit	20.00	17.14	18.57
e)	MindSpark	7.14	5.71	6.43
f)	Rajasthan free laptop yojana	7.14	0.00	3.57
g)	E-sakhi	14.29	14.29	14.29

Table.6 Distribution of the respondents by their overall knowledge about e-learning

S No.	Extent	Male (n ₁ =70)		Female (n ₂ =70)		Total (n=140)	
		f	%	f	%	f	%
1.	Poor	2	2.86	1	1.43	3	2.14
2.	Average	68	97.14	69	98.57	137	97.86
3.	Good	0	0.00	0	0.00	0	0.00

Overall MPS= 46.8

Fig.1 Overall knowledge of the respondents about e-learning



Respondents were aware about various government initiatives such as Utkarsh project (52.14%), about one fifth of respondents (28.5%) knew about e-gyankendra and SWAYAM project(23.57).

Some of the respondents (18.57%) were also aware about e-learning kit and MindSpark (6.43%). A very few knew about e-sakhi (14.29%) Rajasthan free laptop yojana (3.57%).

Respondents' awareness about various government initiatives taken to promote e-learning might be because of the reason that they themselves or people around them were being benefitted by these initiatives. Very few were aware about Rajsathan free laptop yojana this might be because of the reason that only top merit holders gets laptops from government and other students might be ignorant about it.

Many of the schools were benefitted by E-learning kit project under which smart classrooms were installed at government senior secondary schools but only few of the respondents knew about it as they might not be using it much as per their course curriculum requirement.

Extent of knowledge of respondents regarding e-learning

Further an attempt has been made to categorise the respondents on the basis of extent of their overall knowledge about e-learning. It is evident from Table 6 that most of the respondents (97.86%) had average knowledge about e-learning and a few of them (2.86%) had poor knowledge whereas, none of the respondents had high knowledge about it. The average extent of the knowledge is clearly visible as shown graphically in Fig 1.

In a survey conducted by Zazaleena *et al.* (2011) on 120 students, the obtained data indicated that the respondents were aware of e-learning. Significant percentages of the respondents (65%) reported that e-learning is an interesting and enjoyable technology or instrument of learning. Bairwa *et al.* (2014) in his study found that majority of the respondents had low awareness about e-learning whereby it accounted for 70 per cent of the respondents, 10 had moderate and only 20 per cent of the respondents have

high awareness about e-learning. Overall awareness of the respondents about e-learning tended to be low.

In conclusion, although in the present time the most convenient and feasible mode of teaching learning is online or e-learning but still in the rural areas youth lacks it's basic knowledge. It is quite evident from the study that Majority of the respondents (97.86 %) had average knowledge about e-learning whereas rest had poor knowledge (2.14 %). This indicate that the need of the hour is to make the students aware about the recent development in the technology so that they competitive with other students of the nation and world-wide.

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