An estimation of awareness and effectiveness of e-education by the stake holders in professional institutes of Satara district

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Abstract: The study is mainly focused on an estimation of awareness and effectiveness of e-education at professional institutes in Satara district. In this study, survey method was adopted and the questionnaire was used for data collection. This data was collected before COVID-19 pandemics and statistical analysis were used to interpret result. The finding showed that awareness and effectiveness about e-education among the stake holders (students and teacher) was very good. The survey reveals the fact that all students and teachers were having awareness about e-education.

Keywords: effectiveness, e-education, professional institutes, Satara district, stake holders.

I. INTRODUCTION

A.   What is e-education?

E-education is the delivery of education or any type of training by electronic teaching methods. This electronic method can be a computer or a smart phone where teaching material is accessed by use of the internet usually.[1] Other than the internet, CDs, DVDs, television and other similar tools can also be used for e-education.[10] There are several e-education portals offering online courses in India and abroad now. Many people avail these professional certificate courses to enhance their learning and career.[7]

B.   Why we need e-education?

E-education brings education to the user, at any place like work or at home, user never need visit to a school or sit in a traditional classroom.[2] E-education is helpful to university because it provide centralized information access from anywhere, increase in student enrollment ratio, quality e-services, e-participation, increase transparency, innovative teaching tools, improved decision making, private public participation, less corruption and less paper work.[6] E-education provide advantages for students because it enables participation in education, personalized login for each student, saving in time cost & efforts, information & transaction services, job opportunities, social connectivity for collaboration, virtual lectures & webinars. [9] E-education is also helpful to institutes because data can access easily, electronic data exchange with university, saving of hidden operational cost, instant statistical report generation and it is helpful for NAAC accreditation [4].

C.   Where to use e-education?

Utilization of the e-education can occur anywhere including homes, work, office, institutes, court, hospital, schools, fast-food restaurants, any organization, or on any other place.[5] Students and teacher in institute's uses e-education for their degrees and knowledge up gradation. Engineers use e-education in workplace for designing algorithms, models and for online engineering courses. Doctors, Medical students, Nurses and pharmacist uses e-education in hospital and medical for their virtual patient diagnostic, virtual patient history, medicine management, registration of online medical courses etc. Large corporation employees use en e-education for upgrading knowledge in management systems that control their business documents in electronic form. Lawyer uses e-education in court for their court case practices of an e-court.[3] Any age group person uses e-education in home for increasing knowledge, self confidence, and behavior in society by taking admission to different online courses in e-education according to their needs.[8]

D.   Professional education in Satara District:

Satara district is a district of Maharashtra state in western India with an area 10,480km2 and population of 2,808,994 (2001). Satara district consist of four sub-division namely Satara, Wai, Karad and Phaltan divided into 11 talukas. These are Satara, Karad, Wai, Mahabaleshwar, Phaltan, Man, Khatav, Koregoan, Patan, Jaoli and Khandala. Satara district has many professional institutes as shown in TABLE- I

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TABLE-I
PROFESSIONAL INSTITUTES IN SATARA DISTRICT

Taluka	Professional Institutes in Satara District				
	Engineering Colleges	Polytechnic	Medical& Related Colleges	Management Institutes	Law Colleges
Satara	4	7	3	4	1
Karad	2	5	7	5	1
Wai	0	0	0	0	0
Mahabaleshwar	0	0	1	0	0
Phaltan	1	1	0	0	1
Man	0	1	0	0	0
Khatav	0	2	1	0	0
Koregaon	0	0	0	0	0
Patan	0	1	0	0	0
Jaoli	0	0	0	0	0
Khandala	1	1	0	0	0
Total	**8**	**18**	**12**	**9**	**3**

II. OBJECTIVE

The main objective of this study is to find out the impact of e-education towards awareness by the students and teachers and also the level of its effectiveness in professional institutes of Satara district.

III. SCOPE, LIMITATYION AND METHODOLOGY

A Satara district as a bird eye view sample was chosen due to lack of resources to reach to every professional institutes in India, however author wish to find awareness on state or national level. The methodology adopted for this purpose was structured questionnaire, website links, institutes websites etc. in survey method. Contact and questionnaire was used for collection of data. Statistical analysis was used to analyze the obtained data and descriptive analysis was adopted to interpret the results.The sample was selected through stratified random sample methodology; contact method was used to collect data. The sample size of (381) students out of (41817) students and sample size of (319) teachers out of (1876) teachers selected as mentioned in TABLE-I from 50 professional institutes in Satara district..

IV. DATA ANALYSIS AND RESULT

1. **Respondents occupation:**

TABLE-II
OCCUPATION OF RESPONDENTS

Occupation	Frequency	Percent	Valid Percent	Cumulative Percent
Student	381	54.4	54.4	54.4
Teacher	319	45.6	45.6	100.0
Total	700	100.0	100.0	

It is observed from the above table that the total numbers of respondent are 700 out of 54.4% of the respondent are Students and 45.6% are Teachers.

2. **Respondents education sector:**

TABLE-III
EDUCATION SECTOR WISE FREQUENCY OF RESPONDENTS

Education Sector	Frequency	Percent	Valid Percent	Cumulative Percent
Engineering	190	27.1	27.1	27.1
Polytechnic	288	41.1	41.1	68.3
Medical and Related	174	24.9	24.9	93.1
Management	32	4.6	4.6	97.7
Law	16	2.3	2.3	100.0
Total	700	100.0	100.0	

It is observed from the above table that the total number of respondent are 700 out of 27.1% of the respondent from Engineering faculty, 41.1% from Polytechnic, 24.9% from Medical and related, 4.6% from Management and 2.3% from Law Faculty.

3. **Daily computer usage:**

    All the stakeholders are known to computers and work on it effectively. The graph shows daily computer usage by them.

GRAPH-I
DAILY COMPUTER USAGE
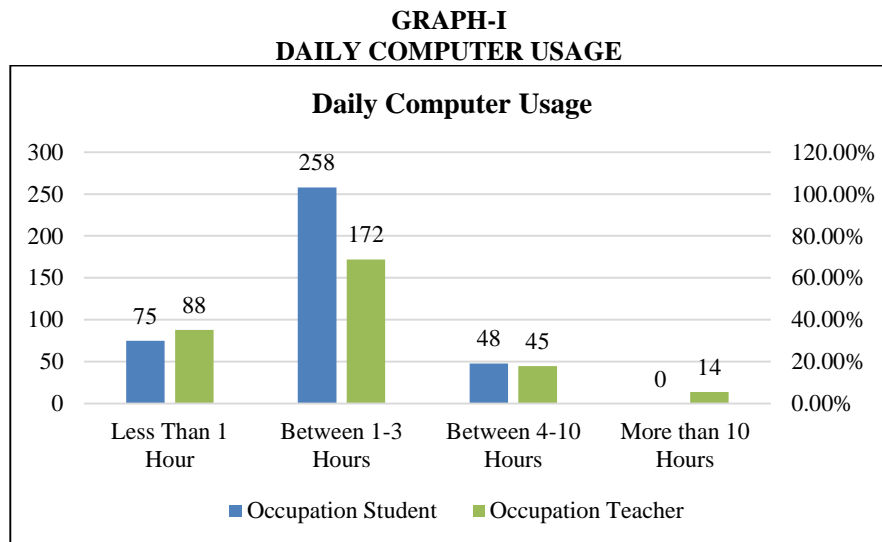
It is observed from above graph that, (75) students use computer daily for less than hour, (258) students use computer for 1-3 hours and only (48) students uses computer daily 4-10 hours whereas (88) teachers use computer daily for less than hour, (172) teachers use computer for 1-3 hours, (45) uses for 4-10 hours daily and only (14) teachers uses computer daily more than 10 hours.

4. **Computer Usage Main Purpose:**

    It is found that, majority of respondent 50.6% use computer mainly for educational applications, 27.6% uses for internet applications, 7.9% uses computer for office applications, 8.0% uses computer for games and entertainment and 6.0% uses computer for social media applications as shown in the following table Table-VI.

TABLE-VI
PURPOSE OF COMPUTER USE

| | | \multicolumn{5}{c}{Computer Used Mainly For} | Total |
		Internet Application	Educational Applications	Office Applications	Games and Entertainment	Social Media Applications	
Occupation	Student	118	206	0	37	20	381
		31.0%	54.1%	.0%	9.7%	5.2%	100.0%
	Teacher	75	148	55	19	22	319
		23.5%	46.4%	17.2%	6.0%	6.9%	100.0%
\multicolumn{2}{c}{Total}	193	354	55	56	42	700
		27.6%	50.6%	7.9%	8.0%	6.0%	100.0%

5. **Internet used:**

    The internet used pattern is apparently found that, majority of respondent 90.1% daily use the internet and only 9.9% uses internet several times.

6. **Daily internet usage duration:**

    The internet used pattern is apparently found that, majority of respondent 90.1% daily use the internet. It is observed that, majority of 55.4% (211) students and 68.3% (218) teachers use internet for 1-3 hours, however the daily usage pattern is as shown in the graph Graph-II.

GRAPH-II
DAILY INTERNET USAGE
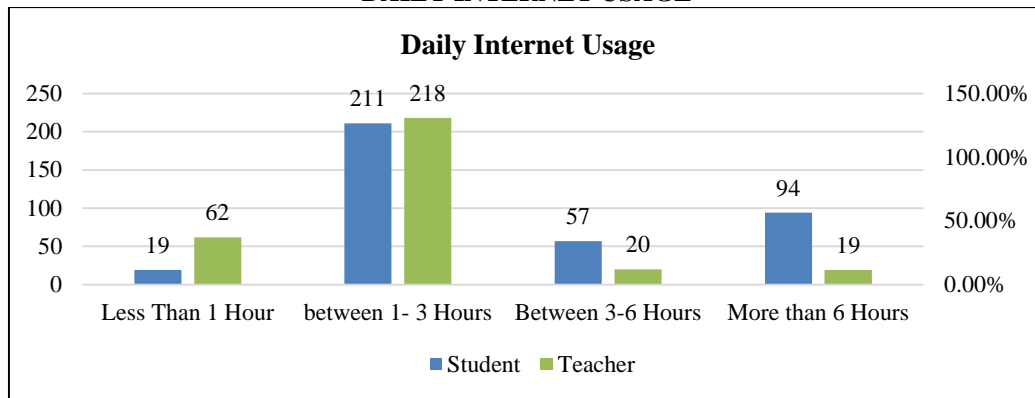
7. **Purpose of internet usage**:

It is found that, majority of respondent use internet for information and knowledge search, moderate use is for e-education, good use for entertainment and social media application and only few uses internet for other purpose as shown in table Table-V.
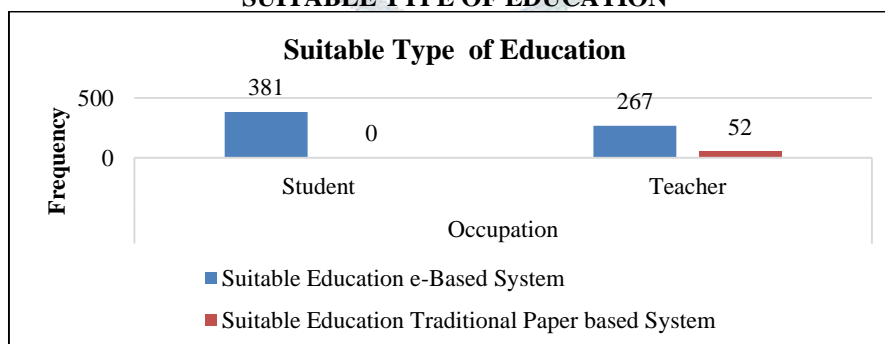
TABLE-V
INTERNET USAGE ABOUT

		Internet Usage About					
		e-Education	Entertainment	Information and Knowledge Search	Social Media Application	Other	Total
Occupation	Student	84	46	120	81	50	381
		22.0%	12.1%	31.5%	21.3%	13.1%	100.0%
	Teacher	75	41	145	57	1	319
		23.5%	12.9%	45.5%	17.9%	0.3%	100.0%
Total		159	87	265	138	51	700
		22.7%	12.4%	37.9%	19.7%	7.3%	100.0%

8. **Suitable type of education**:

It is found that, all the student and teacher Knows about e-Education. All the students are of the opinion that e-based system is suitable for education. The majority of the 83.7% (267) teachers are of the opinion that e-based system is suitable and whereas 7.4% (52) are of the opinion that traditional chalk board based system suitable for education as shown in following graph Graph-III.

GRAPH-III
SUITABLE TYPE OF EDUCATION

9. **Using e-education services**:

The following table Table-VI shows that the majority of respondent are using e-education services for e-education.

TABLE-VI

		Using E-Education Services		Total
		Yes	No	
Occupation	Student	364	17	381
		95.5%	4.5%	100.0%
	Teacher	235	84	319
		73.7%	26.3%	100.0%
Total		599	101	700
		85.6%	14.4%	100.0%

IV. CONCLUSION:

The conclusions are based on opinion given by stakeholders from the professional institutes. The overall result of the above survey based study indicates that the use of e-education system in institutes is reasonably high. There is awareness about e-education among the stake holders with regards to the effective usage of e-education services. The daily usage of computer and internet by most of the students and teachers is 1-3 hours daily. It is basically for the information and knowledge search followed by e-education and social media applications. The survey reveals that most of the stakeholders choose e-education over traditional education system. Further; it is learnt that even in digitization era, e-education may not completely replace the existing traditional version but both will complement each other. Just providing good infrastructure is not enough to effective use of e-education but change and positive attitude, motivation and confidence, face to face interaction is needed which is available in traditional education. The professional institutes need to have directed policy, IT skilled people, technical and financial resources, software required for effective implementation and use of e-education in institutes.

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