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A STUDY OF MOBILE LEARNING USAGE OF SENIOR SECONDARY STUDENTS OF PRAYAGRAJ

- Atul Gurtu , (Researcher)Asstt. Prof. KPTC Prayagraj
- Dr. Saroj Yadav, (Supervisor)Asstt. Prof University of Allahabad

Introduction :

Mobile a instrument based on wireless communication technology was demonstrated by John F. Mitchell and Martin Cooper of Motorola in 1973 for communication but as we know necessity is the mother of invention , a every calamity brings opportunity for invention of new things . As we all are aware that in second half of 2019 (June –Dec) a new strain of corona virus identified (Wuhan, China) in world named as novel corona virus (CoV) or COVID-19 where ‘CO’ stands for corona and ‘VI’ for virus and ‘D’ for disease. According to Hindu 20 Jan 2020 ‘The first cases of COVID-19 in India was reported on 30.01.2020 in three towns of Kerala, where three medical students who had returned from China (Wuhan,) the epicenter of the pandemic. First lockdown was announced in Kerala on 23.03.2020, and then in the rest of the India on 25.02.2020’. After which a series of lockdown are announced .starting from 04 lockdowns (25.03.2020 to 31.05.2020 and then 02 unlock periods (01.06.2020 to 31.07.2020. Due to these lockdown our educational system was hit badly from school closing to changing in school curriculum. According to UNESCO (UNESCO, 2020b) reports that 87% of the world’s student population is affected by COVID-19 school closures . At that time of crisis distance education system of education comes up with the idea of mobile learning . This mobile platform provide a ray of hope for over 1.5 billion students in 195 countries that are affected by COVID-19 pandemic school closures beside several challenges i.e. lack of internet facilities, lack of infrastructure , no technical knowledge to students as well as to teachers and financial capabilities of parents . According to M. Kumaran (Distributed Learning, 2017) Mobile learning refers to instruction that is delivered electronically through various multimedia and Internet platforms and applications. Mobile learning many time interchangeably with other terms such as web-based learning, e-learning, computer-assisted instruction, and Internet-based learning.

Review of literature :

Various researches such as “Mobile Learning in Science: A Study in Secondary Education in Greece “ by Kleopatra Nikolopoulou and Manolis Kousloglou (2019) , Determinants of High School Learners' Continuous Use of Mobile Learning during the Covid-19 Pandemic by Admire Chibisa, David Mutambara (2022) , A Pedagogical Framework for Mobile Learning: Categorizing Educational Applications of Mobile Technologies into Four Types by Yeonjeong Park (2011), A Study on Effectiveness of Online Learning System during COVID-19 in Sargodha by Ijaz Hussain , Rana Muhammad Basharat Saeed and Ali Furqan Syed (2020) etc, are basically based on mobile learning and and its effectiveness but none of the study is not based on what

they like and what they want in other words they are not done on the mobile learning usage of the students. So this question make researcher curious to work on this question.

Objective of the study :

1. To study the Mobile learning usage of class XII students .

Hypothesis :

In the view of the above stated objective , the hypothesis for this study have been presented below

Mobile learning usage differs with respect to gender, socio economic status of class XII students.

Design and methodology :

This study was offline cross sectional survey of class XIIth students of Prayagraj . Initially pilot study in form of interview was conducted to know the students views toward mobile leaning After which closed ended questionnaire was developed in English with total questions 36. Face and content validity was established with the help of subject experts and technical expert . changes were made in the survey form by reducing the number of questions from 36 to 25 . Rephrasing is also done in two questions to make it useable and understandable .

Sample :

Convenient sampling technique was employed to sample the population, and the sample comprised of 98(males 56, Females 42) Senior Secondary students of Brij Bihari Sahay Inter mediate College Kadilpur and 42(male 21 , females 21) students of K P Inter college Prayagraj of the session 2022-2023. Hence sample consist of 77 males student and 63 female of senior secondary class students.

Delimitation of the Study:

This study belongs to XII students of Prayagraj district

TOOL :-

Closed ended offline questionnaire was used with 25 items in English was used.

Statistical techniques used :

The descriptive statistics techniques was used to analyze data .The analysis of data was done with the help of IBM SPSS statistics software 20.0 .

Result: Result of the questionnaire was given below :

Table 1 : Gender wise distribution of the sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid MALE	77	55.0	55.0	55.0
FEMALE	63	45.0	45.0	100.0
Total	140	100.0	100.0	

Table No. 2 : Socio Economic status wise distribution of the sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LOWER CLASS	30	21.4	21.4	21.4
MIDDLE CLASS	110	78.6	78.6	100.0
Total	140	100.0	100.0	

Table No. 3 : Residential background wise distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid RURAL	92	65.7	65.7	65.7
URBAN	48	34.3	34.3	100.0
Total	140	100.0	100.0	

Table No. 4 : Medium wise distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid HINDI	71	50.7	50.7	50.7
ENGLISH	69	49.3	49.3	100.0
Total	140	100.0	100.0	

Table No. 5 : Distribution regarding 'How many hours you watch mobile daily'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less then 1 hr	8	5.7	5.7	5.7

between 1 hr to 2 hr	25	17.9	17.9	23.6
between 2 hr to 3 hr	58	41.4	41.4	65.0
more then 3 hr	49	35.0	35.0	100.0
Total	140	100.0	100.0	

Table No. 6 : Distribution regarding 'type of content do you like most to watch on mobile '

	Frequency	Percent	Valid Percent	Cumulative Percent
Social sites	11	7.9	7.9	7.9
Educational	66	47.1	47.1	55.0
Valid Entertainment	24	17.1	17.1	72.1
News / Current affairs	39	27.9	27.9	100.0
Total	140	100.0	100.0	

Table No 7 : Distribution regarding 'the online sources you have in your house '

	Frequency	Percent	Valid Percent	Cumulative Percent
Desk top	5	3.6	3.6	3.6
Laptop	27	19.3	19.3	22.9
Valid Smart Phones	105	75.0	75.0	97.9
Tablets	3	2.1	2.1	100.0
Total	140	100.0	100.0	

Table No.8 : Distribution regarding 'daily study hours excluding mobile watching '

	Frequency	Percent	Valid Percent	Cumulative Percent
Less then 1 hr	2	1.4	1.4	1.4
between 1 hr to 2 hr	28	20.0	20.0	21.4
Valid between 2 hr to 3 hr	60	42.9	42.9	64.3
more then 3 hr	50	35.7	35.7	100.0
Total	140	100.0	100.0	

Table No. 9 : Distribution regarding ‘Study On Mobile ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
Regularly	71	50.7	50.7	50.7
As and when teacher specified	12	8.6	8.6	59.3
Valid Occasionally	45	32.1	32.1	91.4
Very rarely	12	8.6	8.6	100.0
Total	140	100.0	100.0	

Table No 10. : Distribution regarding ‘Views On Mob Watching ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
waste of time	6	4.3	4.3	4.3
wastage of energy	4	2.9	2.9	7.1
Valid Quite ok	26	18.6	18.6	25.7
Depends upon situation	104	74.3	74.3	100.0
Total	140	100.0	100.0	

Table No. 11: Distribution regarding ‘ type of things you prefer for study ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
Books	103	73.6	73.6	73.6
Guides	2	1.4	1.4	75.0
Mobile learning apps	23	16.4	16.4	91.4
Various Computer sites	12	8.6	8.6	100.0
Total	140	100.0	100.0	

Table No. 12: Distribution regarding ‘ Monthly Expenses On Mob ‘.

	Frequency	Percent	Valid Percent	Cumulative Percent
> 300	75	53.6	53.6	53.6
Between 300- 500	50	35.7	35.7	89.3
between 500- 750	8	5.7	5.7	95.0
< 750	7	5.0	5.0	100.0
Total	140	100.0	100.0	

Table No. 13 ; Distribution regarding Preferred App by students .

	Frequency	Percent	Valid Percent	Cumulative Percent
Bijuys	8	5.7	5.7	5.7
Vedantu	7	5.0	5.0	10.7
Unacademy	32	22.9	22.9	33.6
Others	93	66.4	66.4	100.0
Total	140	100.0	100.0	

Table No. 14 : Distribution regarding ‘Free mobile app developed by Govt. for learning ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
DIKSHA	47	33.6	33.6	33.6
SWAYAM	30	21.4	21.4	55.0
e-Pathshala	45	32.1	32.1	87.1
Digital India	18	12.9	12.9	100.0
Total	140	100.0	100.0	

Table No . 15: Distribution regarding ‘length of idle mobile program ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
> 15 min	14	10.0	10.0	10.0
between 15 min -25 min	63	45.0	45.0	55.0
between 25 min – 40 min	43	30.7	30.7	85.7
< 40 min	20	14.3	14.3	100.0
Total	140	100.0	100.0	

Table No. 16 : Distribution regarding ‘Your span of concentration i.e. in min ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
> 15 min	10	7.1	7.1	7.1
between 15 min -25 min	62	44.3	44.3	51.4
between 25 min – 40 min	55	39.3	39.3	90.7
< 40 min	13	9.3	9.3	100.0
Total	140	100.0	100.0	

Table No. 17 : Distribution regarding 'Strength Of Mob Learning'

	Frequency	Percent	Valid Percent	Cumulative Percent
Videos	42	30.0	30.0	30.0
Music	14	10.0	10.0	40.0
Pedagogical patterns	23	16.4	16.4	56.4
Any time learning	61	43.6	43.6	100.0
Total	140	100.0	100.0	

Table No. 18 : Distribution regarding 'Weakness Of Mob. Learning '

	Frequency	Percent	Valid Percent	Cumulative Percent
Signal strength	67	47.9	47.9	47.9
too many software req	25	17.9	17.9	65.7
Cost	26	18.6	18.6	84.3
Technical knwl.	22	15.7	15.7	100.0
Total	140	100.0	100.0	

Table No. 19: Distribution regarding 'Which Provides Better Learning '

	Frequency	Percent	Valid Percent	Cumulative Percent
Traditional	28	20.0	20.0	20.0
Online	44	31.4	31.4	51.4
Mobile	28	20.0	20.0	71.4
Blended mode	40	28.6	28.6	100.0
Total	140	100.0	100.0	

Table No. 20 : Distribution regarding ‘Prefered Time For Mob. Learning ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Early morning	23	16.4	16.4	16.4
Noon	19	13.6	13.6	30.0
Evening	61	43.6	43.6	73.6
Night	37	26.4	26.4	100.0
Total	140	100.0	100.0	

Table No. 21: Distribution regarding ‘ Increase of academic performance with the use of mobile learning

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agree	31	22.1	22.1	22.1
Agree	97	69.3	69.3	91.4
Neutral	10	7.1	7.1	98.6
Dis agree	2	1.4	1.4	100.0
Total	140	100.0	100.0	

Table No. 22: Distribution regarding ‘How you interact with your teacher in case of doubts in online learning’

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Through What’s app	58	41.4	41.4	41.4
Sms	13	9.3	9.3	50.7
Telegram	48	34.3	34.3	85.0
Phone conversation	21	15.0	15.0	100.0
Total	140	100.0	100.0	

Table 23.: Distribution regarding ‘Is Mob. Learning Is a Alternate ‘

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agree	18	12.9	12.9	12.9
Agree	57	40.7	40.7	53.6
Neutral	59	42.1	42.1	95.7
No Effect	6	4.3	4.3	100.0
Total	140	100.0	100.0	

Table No. 24 : Distribution regarding 'Better Aid For Learning '

	Frequency	Percent	Valid Percent	Cumulative Percent
Books	92	65.7	65.7	65.7
Guides	6	4.3	4.3	70.0
Valid Mobile learning apps	32	22.9	22.9	92.9
Various Computer sites	10	7.1	7.1	100.0
Total	140	100.0	100.0	

Table No. 25. : Distribution regarding 'Effectively Taught Subject '

	Frequency	Percent	Valid Percent	Cumulative Percent
Science	62	44.3	44.3	44.3
Social Studies	64	45.7	45.7	90.0
Valid Mathematics	6	4.3	4.3	94.3
Languages	8	5.7	5.7	100.0
Total	140	100.0	100.0	

Table No. 26 : Distribution Regarding 'Mobile Saves Time And Money'

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	32	22.9	22.9	22.9
Agree	87	62.1	62.1	85.0
Valid Neutral	13	9.3	9.3	94.3
Disagree	8	5.7	5.7	100.0
Total	140	100.0	100.0	

Table No. 27. Distribution Regarding 'Mob Learning Is Eco Friendly'

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	30	21.4	21.4	21.4
Agree	70	50.0	50.0	71.4
Valid Neutral	24	17.1	17.1	88.6
Disagree	16	11.4	11.4	100.0
Total	140	100.0	100.0	

Table No. 28 : Distribution Regarding ‘Updated Know In Mob. Learning’

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	56	40.0	40.0	40.0
Agree	58	41.4	41.4	81.4
Valid Neutral	22	15.7	15.7	97.1
Disagree	4	2.9	2.9	100.0
Total	140	100.0	100.0	

Table No. 29. : Distribution Regarding ‘Mob Improves Social Skills’

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	11	7.9	7.9	7.9
Agree	65	46.4	46.4	54.3
Valid Neutral	25	17.9	17.9	72.1
Disagree	39	27.9	27.9	100.0
Total	140	100.0	100.0	

Interpretation :

Table no. 1 to 4 depicts the distribution of sample gender wise , SES wise , residential background wise and Medium wise . It is clearly reflects then sample has more male students , more rural students more students of lower class and almost equal students of Hindi and English medium.

Table no.5. reflects that 76.4 % (41.4% +35%) student uses mobile more then 2 hours a day. Which is quite a huge percentage use . Table no. 6 reflects 47.1 % of students views educational which reflects that trend is now changing . while 52.9% students views mobile for other reasons i.e. news watching ,entertainment and social sites. Table no.7. reflects that 75% of students have smart phones in there home . Table no. 8 reflects 78.6% of students study for more then 2 hours a day excluding mobile watching . Means students are focusing more then 4 hours a days in both mobile and in study . Table no.9 reflects that more then 50% of students daily uses mobile for studying . Table no. 10 reflects that students views regarding mobile watching are changing now they are judiciously using mobile as per demand. This is good sign . Table no.11 reflects that more then 73% students prefer books for reading as compared to mobile apps and online educational sites . reason may be that availability and cost of book is still a major question for students of rural area. Table no. 12 reflects more then 89% of students monthly expenditure on mobile is less then equals to Rs. 500. Table no. 13. Reflects that students prefer various types of app only un academy app is 22% of students choice while more then 66% of students prefer other app i.e. (class 12 chemistry and physics 28% and CBSE mob. App 26%) . Table no .14. reflects that students are aware of Govt. app which are provided free of cost to students DIKSHA and e - Pathshala (33% & 32%) . Table no. 15. and 16. reflects that more then 75% of students are of views that length

of mobile program should be in range of 15min- 40 min and 83 % students feel that there span of concentration is in between range of 15min- 40 min. Table no. 17 and 18 reflects strength of mobile according to their views 40% are of view of any time learning feature and 30% feel videos are its strength. While issue of signal comes out to be a shortcoming of mobile learning (more then 47% views). Table no . 19 reflect that there is change in trend of students mentality towards traditional mode of teaching more then 75% students prefer online mode (31%), mobile mode (20%), and blended mode (28%). Table no.20 reflects that 43% of students prefer evening time for mobile learning. Table no. 21 reflects that more then 90% of students are of views that there academic performance increased due to mobile Table no. 22. reflects that more then 75% students prefer what's app and telegram messenger for there doubts clarification in online learning . Table no. 23., reflects that 53% students believe that mobile learning will be the new alternative for online learning. Table no. 24. reflects books are still the better aid for learning with more then 65% views. Table no. 25. reflects social studies and science are two subjects which can be better studied with the help of mobile learning. (45% and 44%) . Table no. 26. reflects that 84% students feel that mobile saves time and money during study . Table no.27 reflects that more then 70% students are of view that mobile learning is eco friendly which is the demand of the futuristic society . Table no. 28 reflects more then 80% students are of agrees that mobile provide up to date knowledge to learners . Table no. 29 reflects more then 54% students agrees that mobile improves social skills of the student which helps in improving personality of learner in futuristic society.

Educational Implications :

As it is evident from the analysis that there is certain issues which might be taken on priority while making mobile learning app .

- Students are paying more and more attention towards mobile watching hence more educational app should be made be developers . (Table no. 5 and 6.)
- The length of mobile programs should be increased since majority of students believe that length should be in between 15 min – 40 min). (Table no.15 and16.)
- This study reveals that students prefers mobile watching in evening and late night so developer avoid theses time for up gradation and maintenance of app. (Table no.20)
- The mob app should concentrate on social studies subject also since vast majority of students are of view that social studies will be taught better with the help of mobile learning apps. (Table no. 25)
- The cost of mobile learning app should be placed low so that each and every student can easily afford it while govt. app are doing great job most of the student are aware of these apps. (Table no. 17, 21 & 26)
- Students feel that one of the strength of mobile app is video/graphics , so it is the duty of the developer and programmer to introduce video/graphics judiciously to make it more understandable to learners. (Table no.17 & 26)
- Study implies that mobile learning is paperless or eco friendly learning and moreover it will serves as alternative for traditional learning . (Table 26,27,28,29)

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