Gender Parity in Adoptability of Google Classroom Among Rural College Students With Special Reference to Selected Rural Villages

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Abstract

This study is aimed at analysing whether there is an influence of gender in effective utilization of Google Classroom among college students in rural areas. Sample size of the study was 204 and was selected by Simple Random method. ANOVA was used to analyze the data. The result of the study indicates that there is no impact of gender in the effective utilization of Google Classroom and both the genders are comfortable using Google Classroom. The result further indicates that teachers play a significant role in educating students about Google classroom and mobile is the preferred mode for studying online across all genders.

Keywords : Gender education parity, Google Classroom, COVID-19, virtual learning, rural challenges

I. INTRODUCTION

To avoid the spread of the pandemic COVID-19, Government of India had taken several precautionary measures. The Indian government started a nationwide lock-down of all educational institutes on March 16, 2020 [1]. As government and educational bodies tried to promote online education system during COVID, the option for online education was not a simple task for teachers and students of India [2]. Electronic learning through the World Wide Web, or e-learning via the internet, as it is now more commonly known, has become possible because of advancements in communication, networking, and broadcast technologies. The use of electronic materials is heavily researched from a number of different perspectives [3].

II. PAST AND PRESENT EDUCATION SYSTEM IN INDIA

The education system of ancient times changed according to the periods such as the Vedic, Brahmanic, Muslim, and British periods. In Vedic times, schools were called Gurukulas, which means a home for pupils or '*shishyas*' to learn and acquire knowledge. Physical education was necessary at that time and training in war was given. Apart from this, the exercise provided for crafts. Imported school education system for all castes, vocational education was prevalent in the Muslim period and it taught certain trades to students. The invasion of the British brought some advantages in the education field. British education gave more importance to the current

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school system. There is recognition of several schools and provision of numerous facilities in the education system. Some changes are required in the curriculum. The education system gives equal importance to teachers and students.

Professional development for females should involve more interactions while training for males would be more appropriate when it provides many hands-on activities [4]. Gender plays a significant role in determining the intention of accepting new technology and there are cases where gender differences cannot be discerned [5]. Graduates' experiences with some particular technologies in education are related to gender, area of expertise, and university of origin [6]. There are few statistically significant differences between males and females when adopting an e-learning platform according to the tested model [7]. ICT gender gap negatively affects the socio-economic development of women, and recommended that ICT manufacturers should integrate gender-balanced software and hardware right at the time of production of the technologies [8]. The moderating effect of gender is found to be significant, that for digital inequality is non-significant [9] marginalized/vulnerable learner populations are still left out on EdTech supported learning. This article proposes salient recommendations that could help advance inclusive education discussion and related EdTechs' discourse [10].

III. GOOGLE CLASS ROOM – DISCUSSION

Google Classroom is part of the online Google Apps for Education (GAFE), suite of packed productivity applications for teachers and students in learning and online collaboration. This application is downloaded for free but it must be placed at the level of educational institutions. While GAFE contains many popular Google applications such as Gmail, Google Calendar, and Google Drive, which can be accessed by anyone, Google Classroom is only found at GAFE. This application provides a central site for communicating with students, sending feedback and providing homework. Some of the main strengths of Google classroom are time-saving and organizational features that are easy to use and very simple. Google classroom is like a virtual extension of brick and mortar classrooms. It starts with creating classes and adding students. Then it explores the features found in this application such as sending information,

starting discussions, distributing and collecting tasks [2]. Google Classroom is one such tool that is free of cost and has gained popularity within a short span of time. Findings revealed that teachers perceive it as only a facilitation tool that can be used for document management and basic classroom management, without having a significant impact on teaching methodologies. The responses of the teachers indicate that lack of user-friendly interface is the main reason for its inefficiency. Further studies can be conducted by taking the students' perspective into account [11]. The implication of Google classroom in the implementation of education in Indonesia is to improve teacher's quality and the use of technology by students wisely and so on [12].

IV. BACKGROUND OF THE STUDY

The 21st century has brought with itself a new revolution in the global realm – the information society, which has changed the global macroeconomic landscape. The importance of technology cannot be denied as it has changed the way we live, the way we work, the way we take decisions and the way we correspond with each other. Advancements in Information Communication Technologies not only have the capability to improve the technological arena, but they also have the potential to bring about social and economic improvements. Across the globe, countries have recognized Information and Communication Technology (ICT) as an effective tool in catalyzing the economic activity in efficient governance, and in developing human resources. The role of ICTs to promote gender equality and parity in education can be achieved by targeting their efforts not only towards education itself, but also towards society's cultural and institutional framework. For example, in many countries, parents do not expect their daughters to have careers outside the home [13].

Gender Parity Index (GPI) is a socioeconomic index. It is used to measure the relative enrolment in education of males and females. It is calculated as the quotient of the number of females by the number of males enrolled in a certain stage of education (primary, secondary, etc.).The main aim of GPI is to achieve equal participation of males and females in education. If the value of GPI is 1, it indicates parity between females and males. If GPI is less than 1, it can be said that there is a disparity in favour of boys and if the value is greater than 1, then disparity is in favour of girls [14].

GPI in Higher Education in 2019-20 wass 1.01 against 1.00 in 2018-19 indicating an improvement in the relative access to higher education for females of eligible age group compared to males [15].

The urban and the rural divide having significantly narrowed due to the increase of technology, and better infrastructure development over the recent times, there has been an appreciable improvement in the reach of better higher education to several under-represented groups across the country. However, the need of the hour is a provision of high quality education across all sectors to match the requirements of a growing Indian economy.

V. SCOPE OF RESEARCH

The quality of education in rural skills is challenging. Teachers in rural areas may face certain challenges, such as limited training in using digital tools, exposure to technology, and apprehensions of new modes of teaching. Although about 78% of India's 1.3 billion population has mobiles phones, tele-density in rural areas is around 57% according to the Telecom Regulatory Authority of India (TRAI). These numbers are not conducive to virtual classroom for the majority. Even in homes with Smartphone, usually owned by the father, it may not be available to children for learning. As one goes deeper into the interiors of the country, the divide widens considerably [16]. Some of the schemes have been promoted to include providing broadband connectivity to a quarter of a million rural villages by 2019 and making Wi-Fi connections available in schools [17]. Therefore, it is necessary to identify the challenges in using Google Classroom from the perspective of students and also identify the gender parity in easy access to Google Classroom. This study attempted to find out whether there is an influence of gender in easy access to Google Classroom and to identify the areas which need further training for effective use of Google Classroom.

VI. OBJECTIVES OF THE STUDY

✤ To analyse whether there is influence of gender in effective utilization of Google Classroom.

✤ To understand the preferred mode of online education.

✤ To identify the source to educate about using Google classroom.

VII. DATA COLLECTION

Primary data consisted of original information collected for this study. The data which were collected for the first time is original in character and secondary sources for this study were published records, market journals and websites. 204 samples were used for this study and Simple Random method was adopted. A structured questionnaire was prepared to send to Google form. Percentage analysis and ANOVA were used to analyse the data and test the hypotheses. The villages taken for this study were Enathur, Vyavoor, and Kilambi.

VIII. HYPOTHESIS

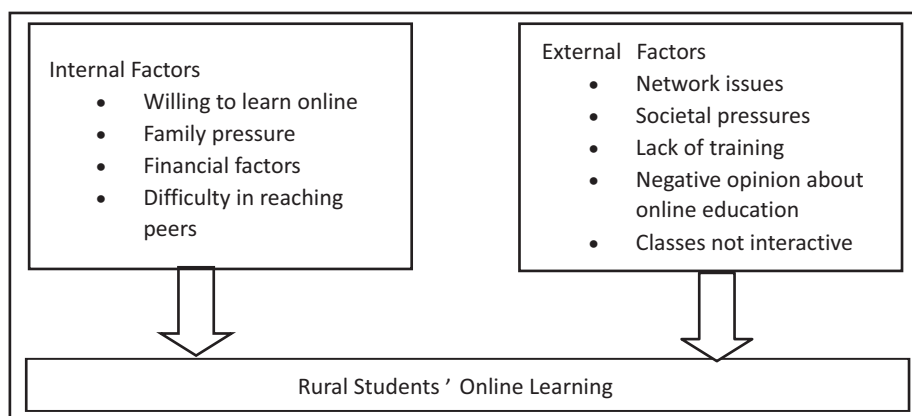✤ **H1 :** There is significant difference in knowledge of using Google Classroom among the genders.

Fig. 1. Some of the challenges of online education for rural students

✣ **H2 :** There is significant difference in comfort to download lectures, notes etc. among the genders.

✣ **H3 :** There is significant difference in knowledge on uploading assignment among the genders.

✣ **H4 :** There is significant difference in getting help from friends in case of difficulty among the genders.

✣ **H5 :** There is significant difference in interest level on learning through Google classroom among the genders.

✣ **H6 :** There is significant difference in opinion about getting uninterrupted internet connectivity and efficiency of Google classroom among the genders.

✣ **H7 :** There is significant difference in losing interest when there is an internet issue among the genders.

IX. DATA ANALYSIS

Tables I to III show the data analysis.

X. RESULT

The mean values of males and females are 3.62 and 3.74 and standard deviation values are 1.134 and 0.856 (F 0.645) respectively but the p value is more than 0.05 (0.423), so there is no significant difference in knowledge of using Google Classroom among the genders.

The mean values of males and females are 3.7 and 3.87 and standard deviation values are 1.204 and 0.922 (F 1.007) respectively but the p value is more than 0.05 (0.317), so there is no significant difference in comfort to download lectures, notes etc. among the genders.

The mean values of males and females are 4.01 and 3.99 and standard deviation values are 1.136 and 1.157 (F 0.17) respectively but the p value is more than 0.05 (0.897) and hence, there is no significant difference in knowledge on uploading assignment among the genders.

The mean values of males and females are 3.31 and 3.33 and standard deviation values are 1.318 and 1.172 (F 0.14) respectively but the p value is more than 0.05 (0.906), so there is no significant difference in getting help from friends in case of difficulty among the genders.

The mean values of males and females are 3.56 and 3.52 and standard deviation values are 1.256 and 1.093 (F 0.36) respectively but the p value is more than 0.05 (0.85), so there is no significant difference in interest level on learning through Google classroom among the genders.

TABLE I.

CLASSIFICATION OF THE RESPONDENTS ON THE BASIS OF THEIR DEMOGRAPHIC DETAILS

	Particulars	Number of Respondents	Percentage
Gender	Male	135	66.2
	Female	69	33.8
Educational background	Under graduation	139	68.1
	Post graduation	65	31.9
Medium of study	Tamil	70	34.3
	English	134	65.7
Category of school	Private	98	48.0
	Government-aided	15	7.4
	Government	87	42.6
	Direct	4	2.0
Device type	Mobile	200	98.0
	Laptop	4	2.0
Knowledge gained source	Teachers	120	58.8
	Friends	45	22.1
	Parents	4	2.0
	Internet	35	17.2

Source : Primary Data

TABLE II.

DESCRIPTIVE STATISTICS

		N	Mean	Std. Deviation
Knowledge of using Google Classroom	Male	135	3.60	1.134
	Female	69	3.72	0.856
	Total	204	3.64	1.048
Comfort to download lectures, notes etc.	Male	135	3.70	1.204
	Female	69	3.87	0.922
	Total	204	3.76	1.117
Knowledge on uploading assignment	Male	135	4.01	1.136
	Female	69	3.99	1.157
	Total	204	4.00	1.140
Getting help from friends in case of difficulty	Male	135	3.31	1.318
	Female	69	3.33	1.172
	Total	204	3.32	1.268
Google Classroom increases learning interest	Male	135	3.56	1.256
	Female	69	3.52	1.093
	Total	204	3.54	1.201
Uninterrupted internet connectivity	Male	135	2.99	1.054
	Female	69	2.99	0.899
	Total	204	2.99	1.002
Internet issue and losing interest	Male	135	3.36	1.261
	Female	69	3.48	1.023
	Total	204	3.40	1.185

The mean values of males and females are 2.99 and 2.99 respectively and standard deviation values are 1.054 and 0.899 (*F* 0.02) respectively but the *p* value is more than 0.05 (0.962), so there is no significant difference in opinion about getting uninterrupted internet connectivity and efficiency of Google Classroom among the genders.

The mean values of males and females are 3.36 and 3.48 and standard deviation values are 1.261 and 1.023 (*F* 0.431) respectively but the *p* value is more than 0.05 (0.512), so there is no significant difference in losing interest when there is an internet issue among the genders.

XI. FINDINGS

Findings reveal that teachers/faculty members are the biggest source for educating students about using Google Classroom. It is important to note that majority of students have responded that they have sufficient knowledge of using Google Classroom, and they are comfortable in uploading and also in downloading the class content, notes etc.

It is also important to note that mobile phone is an important device for online learning, and it is further noticed that around 40% of the respondents have Neutral opinion about the availability of good internet connectivity, around 35.7% of the respondents also feel that internet fluctuations will reduce their level of interest in studies. It is important to note that there is no gender wise impact on downloading class notes, uploading of the class-works, getting help from peer groups etc. It is also further understood that there is no genderwise impact on the opinion that Google Classroom increases the learning interest and getting uninterrupted internet connectivity and also interruption in internet will influence the interest in learning.

XII. CONCLUSION

Education is a continuous learning process and teaching

TABLE III.
ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Gender* knowledge in using Google classroom	Between Groups	0.709	1	0.709	0.645	0.423
	Within Groups	222.168	202	1.100		
	Total	222.877	203			
Gender * comfort to download lectures, notes etc.	Between Groups	1.256	1	1.256	1.007	0.317
	Within Groups	251.974	202	1.247		
	Total	253.230	203			
Gender * knowledge on uploading assignment	Between Groups	0.022	1	0.022	0.017	0.897
	Within Groups	263.978	202	1.307		
	Total	264.000	203			
Gender * getting help from friends in case of difficulty	Between Groups	0.023	1	0.023	0.014	0.906
	Within Groups	326.267	202	1.615		
	Total	326.289	203			
Gender * Google Classroom increase learning interest	Between Groups	0.052	1	0.052	0.036	0.850
	Within Groups	292.551	202	1.448		
	Total	292.603	203			
Gender * uninterrupted internet connectivity	Between Groups	0.002	1	0.002	0.002	0.962
	Within Groups	203.978	202	1.010		
	Total	203.980	203			
Gender * internet issue and losing interest	Between Groups	0.607	1	0.607	0.431	0.512
	Within Groups	284.432	202	1.408		
	Total	285.039	203			

methodology changes from time to time. The success of education remains in adapting to the changes and upgrading to the options available, thanks to the development of technology that has helped students continue their education even in the time of pandemic without any issues, but there is a difference between the comfort of using technology between rural and urban areas and also between boys and girls. Empowering rural women with education is the real success and progress of the country like India. Through this paper we found that rural area students are also able to adopt to online education and there is no gender impact in adopting to the Google Classroom Social schemes that focus on providing data and laptops may also increase the acceptance of online education. Further, elaborate studies may also help to formulate social strategies also.

AUTHORS' CONTRIBUTION

Dr. V. Vinuchakravarthi, S. Srinivasan, and Dr. A. Vikraman have together worked on the research and performed the work described in the paper. Statistical tool was used to generate the output.

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CONFLICT OF INTEREST

The authors certify that they do not have any financial association with any institute in the study area.

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