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# Does educational use of social media augment exam performance of students in rural areas?

# A Case study of Charhi Panchayat, Hazaribag district, Jharkhand

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## Abstract:

Educational videos and internet searches have become popular source among students for clarifying doubts and enhancing their cognitive capacities. Earlier, students needed to move out to metropolitan cities from states such as Bihar and Jharkhand of India, to gain better understanding and compete in national level exams. Now, with the easy accessibility and high fidelity of online platforms, knowledge on any subject seems to be proliferating to every class, which historically reminds of the contribution made by Gutenberg's printing press in the enlightenment of Europe. Several studies have been conducted on the utility of educational videos and internet searches and have found them to be productive; however, most of these studies are based upon urban areas. The present study tries to examine whether this usability and positivity applies to schools in rural areas as well, does it extend to the tribal communities who are normally stereotyped as living on the edge, and does it have any correlation with their performance in final exams? The researcher conducted survey of students in Charhi Panchayat of Hazaribag district and found majority of students to be using YouTube and Google search engines for more than 30 minutes per day for educational purposes. Additionally, there was no significant difference between the tribal and non-tribal students using them, and there was a high correlation between the usage and their performance in final exams.

 $\label{lem:condition} \textbf{Keywords: Social Media, Search Engines, YouTube, Google, Hazaribag, Jharkhand Academic Council (JAC), Correlation, Tribe, India.}$ 

**Introduction:** Remote online learning and teaching has become a common alternative and an additional means to face-to-face educational practice around the world. Students use them for clarification of doubts as well as for gaining additional information, while teachers use them to increase their knowledge, get access to learning materials, and learn new teaching techniques. Several studies have been done on the efficacy of online platforms and

most have found them to be effective. A study done on students of agricultural graduates from universities under National Agricultural Research System in India, showed majority of the students to have positive attitude toward online learning platforms. The study also found that they preferred recorded lectures over streaming ones. The study also revealed that students in the villages have connectivity problems, which hinders their learning through such virtual platforms<sup>1</sup>. Another study done on the students of University of Bangladesh revealed positive effects of watching educational videos on their performance in studies<sup>2</sup>. The study also revealed that they preferred android phones and shorter videos over laptops and longer videos. Another study on the students of China revealed that shorter videos of about 8 minutes were more engaging to students compared to longer videos of about 55 minutes. Further, the shorter videos had more potential in improving performance of students<sup>3</sup>.

A study done on the Digital Study Hall used in rural primary schools of India showed that online educational materials enhance teachers' grooming capacities. The study was based upon government schools in rural areas of Lucknow, Uttar Pradesh. The Digital Study Hall system gives primary teachers opportunity to learn from more experienced teachers and also enrich their contents to teach more efficiently<sup>4</sup>. Another study done on university students of Pakistan showed positive effects of online videos<sup>5</sup>. In yet another study done in Cuddalore district of Tamil Nadu, India, the results showed that use of social media helps in academic performance of students<sup>6</sup>. Notwithstanding the pool of studies with constructive effects of online platforms, there are some studies that highlight negative aspects of online studies, and also those that show almost no difference between face-to-face and online teaching<sup>7</sup>. There are other studies as well that show online teaching and learning to have immense potential if quality of content is standardized and the messages are delivered efficiently<sup>8</sup>.

In India, there is a perception that rural areas, especially in the states that show low development index such as Jharkhand, which houses 28.81% multi-dimensionally poor people<sup>9</sup>; online platforms are still not efficiently used by students. The following study tries to examine the efficacy of this perception by surveying students studying in rural areas of Hazaribag district in Jharkhand.

# **Research Hypothesis:**

**H1**: Social media and search engine - YouTube and Google, are used for more than 30 minutes per day by high school students in villages for educational purposes.

**H2**: There is no significant difference in the educational usage of YouTube and Google search by tribal and non-tribal students in villages.

**H3**: There is a positive correlation between the usage of YouTube and Google search and students' performance in final Jharkhand Academic Council (JAC) board exam.

**Method Location:** The study is based upon students of Charhi Panchayat, Hazaribag district of Jharkhand, which has also been the PhD research area of the author. Hazaribag district is geographically the heart of the state. It has a total population of slightly over 1.7

million with about 85% living in rural areas. The literacy level in urban areas is 86% while in rural areas it's 67% <sup>10</sup>. The district has pleasant weather conditions. It has thick forest cover and natural lakes and gets pre-monsoon showers even during the middle of June. It used to have a rich wild life sanctuary which has been now defunct for decades. Even though the sanctuary has the potential for tourist attraction, which can raise the economic status of the residents, not much attention is given in promoting such activities. Coal excavation has become a big business in this area, which perhaps will stop in the coming years. That aside, people living here are mostly in government jobs or they are into small business such as shop owners or traders. The villagers are mostly small farmers, drivers of public vehicles, small business/shop owners and daily wage labourers.

Charhi is a panchayat in tribal dominated Chruchu block of Hazaribag district. It lies at the highway and consists of a single large village named "Sarbaha" which has several tolas in it; some of the tolas are 3-4 kilometers interior to the highway from where students walk down to the main road. Sarbaha houses around 2423 people in which half of them belong to tribal communities. The literacy rate of Sarbaha village is about 63% <sup>11</sup>. The villagers are shop owners at the highway, small farmers and drivers of public vehicles. Most of them earn enough to support their children's studies. As a norm, their children initially get enrolled in the primary school of their village-tola and after completing primary schooling they take admission in Government High School or missionary run Masi Marsal School located at the highway in Charhi. Presently, many private schools are opening up, but villagers still prefer government or the missionary school.

**Data Collection & Analysis:** The author conducted a survey of randomly selected students at Government High School and also at Masi Marsal School, both of which are located at the highway in Charhi Panchayat. Besides other questions, they were asked on the duration for which they use YouTube and Google search for educational purposes. The author asked the questions to both boys and girls. The students mostly replied in approximates of 15, 30, 60, and 120 minutes as they could not say exactly how many minutes they watch per day. The data was then examined for mean, mode and also standard deviation.

To find the difference between usage of YouTube and Google search among tribal and non-tribal students, survey and interviews of class 10<sup>th</sup> students of Masi Marsal School was conducted. The bifurcation of students was done on the basis of their surnames and the average was deduced from the data. A t-test was also performed to find the significance of difference in the usage between tribal and non-tribal students.

To find the correlation between the usage of YouTube and Google search and performance of students, results of the same class 10<sup>th</sup> students of Masi Marsal School was compared with their media usage. Jharkhand Academic Council results were made available to the author by the school authority. Pearson's coefficient was used to find the direction and degree of this correlation.

**Results:** The study set out to find three concerning issues; one, the average usage of social media for educational purposes by students, second, difference in usage by the tribal and

non-tribal students, and third was correlation between the above usage and their performance in final board exam.

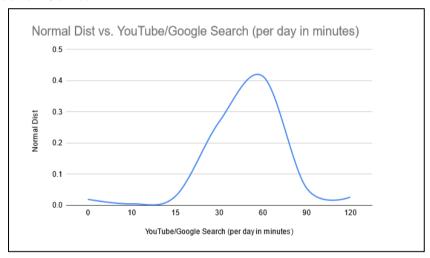
**H1**: Social media and search engine - YouTube and Google, are used for more than 30 minutes per day by high school students in villages for educational purposes.

The results showed 76 students out of 100 used YouTube and Google for more than 30 minutes per day therefore Hypothesis-1 seems to be true. In fact, the average usage was 54.8 minutes, which is much higher than the hypothetical value of 30 minutes. Twenty students used social media for 10 or 15 minutes, while 6 students did not use social media at all, because their parents could not afford android phones, while 5 of them said they used their friends' android phones for educational purposes.

N	M (in minutes per day)	SD	Range (in minutes per day)
100	54.8	34.3	$0 \le x \le 120$

N: Total number of students surveyed. M: Mean. SD: Standard Deviation. R: Range

## Normal Distribution Curve:



**H2**: There is no significant difference in the educational usage of YouTube and Google search by tribal and non-tribal students in villages.

For this hypothesis, survey was conducted of Masi Marsal School 10<sup>th</sup> standard students and bifurcation of tribal and non-tribal students was done on the basis of their surnames. A t-test was performed for finding the significance in their usage.

<b>N1</b>	N2	M1 (in	M2 (in	t-score	Significance	at	.1
		minutes	minutes		level		
		per day)	per day)				
		per day)	per uay)				

N1: Tribal Students. N2: Non-Tribal Students. M1: Mean usage by Tribal Students. M2: Mean usage by Non-Tribal Students.

As the results indicate, there is no significant difference in the usage of YouTube and Google search among tribal and non-tribal students, even at .1 level of significance. In fact, if we examine closely, the mean usage by the tribal students (MI) is more than that of the non-tribal students (M2) of the village.

**H3**: There is a positive correlation between the educational usage of YouTube and Google search, and students' performance in final board exam.

In this section of the study, exam results of same students who were surveyed for H2 were compared with their usage of YouTube and Google Search. Jharkhand Academic Council Board exam results of the students were procured from Masi Marsal School authorities.

N	M1 (usage in minutes	M2	SD1	SD2	CORRELATION
	per day of YouTube	(Score in final JAC			
	and Google search)	board exam in			
		percentage)			
50	75.8	69.2	32.3	8.8	.698

N: Total tribal and non-tribal students surveyed. M1: Mean of media usage. M2: Mean of exam scores. SD1: Standard deviation of media usage. SD2: Standard deviation of exam scores.

Pearson coefficient was used to determine the strength and direction of correlation between usage and performance. The high coefficient of positive .698 suggests a strong correlation between the usage and performance of the students. The above surveyed students comprised of both boys and girls and a Santal tribal girl scored the highest with 93% marks in the final exam, while only six students scored below 60%.

**Discussion:** As the study indicates, in Hypothesis -1, the rural students use YouTube and Google search for more than 30 minutes for their studies. The sample was picked up from a government and a missionary school located at Charhi Panchayat of Hazaribag district, Jharkhand. Charhi is on the highway and therefore one can expect high income and exposure, which may have led to the high usage of social media. The results therefore cannot be generalized to the whole of Hazaribag district. It can be however inferred that those villages that are nearby the district headquarter or connected to the highway where broadband connection is available and income of parents is stable, students frequently use social media for online learning. For the villages that are not connected to the highway and lie 30-40 kilometers interior to Hazaribag district headquarter, the usage of social media may be comparatively less. The same seems to be true with villagers of other districts of Jharkhand.

This study also throws some insights on mainstreaming of tribal students through social media. The social media usage and performance in final exam of tribal students is higher than students of other communities. Here again a caution on generalization is required because the survey was done in a missionary school where strict discipline is maintained

with teachers as well as students. There is a mix of tribal and non-tribal teachers so that tribal and non-tribal students are comfortable in learning.

The study also shows positive correlation between the usage of YouTube and Google search, and students' performance in the final Jhanrkhand Academic Board exam. As told by the students, use of YouTube and Google search is mainly done to supplement their studies at home. Normally, while studying at home, the moment they need clarification or further information, they log on to YouTube or Google search, and that's how they use these two. As such, YouTube and Google search are not the sole reasons for their better performance rather it is their duration of studies at home and the productive use of these two media while studying, which is the reason for their better performance.

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