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# Understanding YouTube Usage Intentions through Perceived Belongingness among Rural Students: A Technology Acceptance Model Approach

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# ABSTRACT

This study examines how rural female tutee' perceived sense of belonging to YouTube content influences their use of it as an instructional resource. Grounded in the Technology Acceptance Model (TAM), it examines the impact of perceived belongingness on understanding, usefulness, and motivational drive. Data from 404 rural students in Ambedkar Nagar District, Uttar Pradesh, India, were inspected using Structural Equation Modeling (SEM) in RStudio. Findings indicate that perceived belongingness significantly enhances understanding, usefulness, and behavioral intention to embrace YouTube for study purposes. Moreover, the perceived knowledge and usefulness of the YouTube content strongly motivate students' engagement. These realizations provide valuable guidance for educators, researchers, and policymakers in refining digital learning strategies to improve educational outcomes.

**Keywords:** Belongingness, learning, motivational drive, perceived understanding, perceived usefulness, rural students, YouTube content.

#### INTRODUCTION

YouTube has become a valuable educational tool that promotes student engagement by encouraging critical thinking and enriching learning experiences (Clifton, 2011). Its freely available content and videos contribute to its widespread popularity among diverse users (Koya et al., 2012). Fun and fascinating YouTube videos increase students' analytical reasoning skills by enhancing their participation and engagement (June et al., 2014). YouTube is used among university scholars (Moghavvemi et al., 2018), educators (Pratama et al., 2020), in surgical education (Farag et al., 2020), and within healthcare and neurosurgery contexts (Samuel et al., 2017). The integration of YouTube in teaching tools strengthens students' content learning and serves as a chief teaching asset in classrooms (Alwehaibi, 2015). This active participation has repercussions on the perceived evolution of interdisciplinary competencies and instructional efficacy (Orús et al., 2016). The involvement of video-based learning in traditional education has been recognized as a highly effective pedagogical strategy (Morgado et al., 2024).

Studies indicated that socio-economic and cultural differences positively influence social media usage (Hsu et al., 2015). However, gender distinctions in using and learning digital networks appear to be minimal (Siddiq et al., 2017). Additionally, technological barriers and challenges persist in ICT-based remote learning. Prior work shows the usage of YouTube content for learning and educational purposes. This study examines the perceived sense of belongingness factor of YouTube content as a tool for rural girls to adopt it as an educational tool. The TAM model was adopted to examine the psychological impact of YouTube adoption on rural female students. These insights will benefit educators, practitioners, and researchers, providing a foundation for further learning and research initiatives.

#### LITERATURE REVIEW

#### Social Media's Role in Education

Social media significantly enhances education by linking conventional and unconventional learning, fostering engagement, and expanding connections (Kumar & Nanda, 2024). Chen and Bryer (2012) demonstrated its role in enriching discussions, while Alwehaibi (2015) found its effectiveness in student learning compared with traditional lecture methods. Zaidi et al. (2018) highlighted students' preference for e-learning, particularly in modern tutees. Social labeling and perceived usefulness drive students to social media e-learning (Habes et al., 2019). Fadhil et al. (2020) noted YouTube's effectiveness in capturing students' attention, and Syahputra et al. (2023) emphasized its accessibility and convenience. While the educational impact of social media is evident, the specific role of platforms like YouTube requires further exploration.

#### The Impact of Motivational Drive Toward the Usage of Technology

Several factors influence the motivational drive toward technology use, such as perceived usefulness, information quality, and response time (Lin & Lu, 2000). Satisfaction with emotional and cognitive aspects also impacts behavioral intention (Martin et al., 2008). User-friendliness and utility perception also affect technology adoption (Shroff et al., 2011). Akar and Mardikyan (2014) found that practicality, benefits, societal impact, fun, and credibility positively impact the motivation to use YouTube. The utility and user-friendliness also affect students' decisions to employ online educational systems (Chang et al., 2017). Hunde et al. (2023) identified pleasure and facilitating conditions as key factors driving tutee motivation to embrace online learning. While behavioral intention is crucial for technology adoption, certain factors influencing YouTube usage remain underexplored.

## Effect of belongingness on social media user choice

Belongingness impacts individuals differently across contexts. Kim et al. (2016) found that student belongingness is linked to the usage of social media and smartphones, enhancing community engrossment. Kim and Drumwright (2016) navigated the influence of amiability on consumer motivation, satisfaction, and trust. Lewis et al. (2019) showed how student demographics shape perceptions of community values. Gruss et al. (2020) confirmed that belongingness increases engagement, while Won et al. (2021) emphasized its role in helping students understand their social environment. Miranda et al. (2023) also highlighted that social media addiction is driven by attachment to the content. However, the impact of belongingness on rural female students with social media remains unexplored.

#### **RESEARCH GAP AND OBJECTIVE**

Despite the growing integration of digital learning platforms, limited research has explored the role of the perceived belongingness of rural female students in adopting YouTube as an instructional resource. The existing studies emphasize e-learning adoption. Furthermore, research on video-based learning primarily focuses on urban students or higher education learners, leaving a significant gap in understanding how rural female students perceive and utilize YouTube as an educational tool. The interplay between perceived belongingness, understanding, and usefulness remains underexplored, particularly in rural contexts. While the TAM has been globally applied to study e-learning adoption, its application in assessing the motivational drive of female rural students to use YouTube for learning is scarce. Addressing these gaps is crucial for developing inclusive digital learning strategies that enhance educational accessibility and engagement among rural learners.

Therefore, this study aims to examine the impact of perceived belongingness on the motivational drive of rural female students to use YouTube as an instructional resource, considering the mediating roles of perceived understanding and perceived usefulness.

## THEORETICAL FRAMEWORK AND HYPOTHESES FORMATION

## TAM Model

The present research is based on the Technology Acceptance Model (TAM), initially proposed by Davis in 1986. It has been comprehensively employed across numerous fields to explain the factors influencing the adoption and implementation of innovation. The existing model possesses four variables: perceived belongingness, perceived understanding, perceived usefulness, and the motivational drive of rural female students to use YouTube for learning purposes.

#### Figure 1

Conceptual Model Showing the Impact of Belongingness on Rural Students'



Intentions to Use the YouTube-Based Technology Acceptance Model (TAM)

Constructs	Code	Measurement	References
		indicators	
Perceived	PUD1	The Content related to	Habes et al.
Understanding		our studies is	(2019)
(PUD)		explained in lucid and	· · · · ·
		straightforward terms.	
	PUD2	The language of the	
		educators is	
		understandable.	
	PUD3	The Lucid	
		presentation of the	
		content helps me to	
		understand the tough	
		subjects.	
Perceived	PU1	YouTube helps us	Davis
usefulness		filter content	(1989)
(PU)		according to our	
		interests, which saves	
		my time.	
	PU2	It helps me to	
		complete my	
		homework.	
	PU3	It helps me prepare for	
		competitive exams.	
Motivational drive	MD1	I intend to continue	Suh and Han
to use YouTube		using YouTube in my	(2002)
(MD)		studies.	
	MD2	I continue to use	
		YouTube to prepare	
		for the government	
		exams.	
Dorooivod	DD 1	The local language of	Dowo of
Relongingness	IDI	the educators helps me	AUWEEL
(PR)		to connect easily	(2023)
(1 D)	PR2	The comment section	(2020)
	1 D2	under the channel is	
		nice and provides	
		support for the auery.	
	PB3	The common goal	
	120	shared by other	
		viewers makes us are	
		connected.	

#### Table 2

Items	features	Frequency	Percentage
Age	13-15	101	25%
•	16-18	187	46%
	19-20	116	29%
Class	High School	176	44%
	$(9^{\text{th}} \& 10^{\text{th}})$		56%
	Intermediate (11 <sup>th</sup> & 12 <sup>th</sup> )	228	

Demographic Description of the Respondents

#### **Hypothesis Construction**

By addressing the above gaps, a Technology Acceptance Model (TAM) framework is developed, and corresponding hypotheses are formulated, as depicted under:

**H**<sub>1</sub>: The Perceived Sense of Belongingness with the YouTube content affects the Perceived Understanding of Rural Female Students.

H<sub>2</sub>: The perceived sense of Belongingness with YouTube content affects the perceived Usefulness of rural female students.

 $H_3$ : The perceived sense of belongingness affects the motivational drive of rural female students to use YouTube.

H4: Perceived understanding of YouTube affects perceived usefulness by Rural female students.

H<sub>5</sub>: Perceived Understanding affects the motivational drive to use YouTube by Rural female students.

 $H_6$ : Perceived usefulness affects the motivational drive to use YouTube by Rural female students.

#### METHOD

#### **Research Design & Questionnaire**

The data were collected from rural female students in Ambedkar Nagar District, Uttar Pradesh, India (Bharat). Using probability sampling, 450 questionnaires were distributed and measured on a 5-point Likert scale. The questionnaire focused on four key variables: rural students' perceived understanding of YouTube content, Perceived Usefulness, the motivational drive to use YouTube, and the perceived sense of belongingness associated with YouTube usage. Table 1 outlines the constructs, their measurement indicators, references, and factor loadings for the study.

#### Sample Procedure and Demographic Profile

The study's sample size should be 384, applying the Cochran formula, based on a 5% margin of error and a 95% confidence level. Out of the questionnaires distributed, only 404 valid responses were obtained from rural schoolgirls in Ambedkar Nagar District, Uttar Pradesh. Participants were aged 13 to 20, with 25% in the 13-15 age group, 46% in the 16-18 range, and 29% aged 18-20. The focus was on girls from classes 9 to 12, with 56% in intermediate level and 44% in high school. This demographic profile (Table 2) comprehensively explains the target population.

#### **Data Analysis**

The researcher divides the evaluation into two steps (Hair et al., 2014).

Step 1- Consists of the computation of Internal trustworthiness, construct justifiability, and Divergent defensibility.

Step 2- Assessment of Hypothesis and Testing R<sup>2</sup>.

#### FINDINGS

#### **Measurement Model**

The study assessed convergent validity through various metrics, including factor loadings, coefficient omega, and AVE, with AVE values ranging from 0.591 to 0.782, surpassing the 0.5 threshold (Bagozzi & Yi, 1988). Internal consistency and reliability were validated through Cronbach's  $\alpha$  coefficients (0.653 to 0.722), which exceed the recommended level, 0.650 (Hair et al., 2017), and Internal consistency (Rhoc) values between 0.812 and 0.878, which are above the 0.7 criterion (Anderson & Gerbing, 1988). These metrics demonstrated a high degree of homogeneity and interrelation among variables, confirming that the constructs capture the intended phenomena. Overall, the evaluation of convergent validity and internal steadiness culminated in a robust research methodology, ensuring reliability, validity, and trustworthiness. This strengthens the reliance on the study's outcomes and supports the credibility of the measured constructs.

Divergent validity was confirmed using Fornell and Larcker's 1981 tests (Table 4) and the HTMT (Table 5). The values represented diagonally in Table 4 are greater than the square root of the leftover values. Hence, discriminant validity is tested using Fornell and Larcker. The values in Table 5 are below 0.90. Thus, divergent rationality is established using HTMT.

# Table 3

Constructs	Loadings	Cronbach Alpha	Rhoc	RhoA	AVE
Perceived	0.710	0.653	0.812	0.648	0.591
Belongingness	0.796				
	0.797				
Perceived	0.878	0.719	0.814	0.738	0.639
Understanding	0.759				
	0756				
Perceived	0.729	0.697	0.832	0.697	0.623
Usefulness	0.843				
	0.793				
Motivational	0.869	0.722	0.878	0.730	0.782
drive to use	0.899				
YouTube					

# Result of Quantification model with validity and Reliability

# Table 4

# Divergent rationality (FORNELL & LARCKER, 1981)

	Perceived Belongingness	Perceived Understanding	Perceived Usefulness	Motivational drive to use YouTube
Perceived	0.769			
Belongingness				
Perceived	0.275	0.800		
Understanding				
Perceived	0.315	0.409	0.789	
usefulness				
Motivational	0.212	0.362	0.316	0.884
drive to use				
YouTube				

# Table 5Divergent rationality (HTMT)

	Perceived Belongingness	Perceived Understanding	Perceived usefulness	Motivatio nal drive to use YouTube
Perceived				
Belongingness				
Perceived	0.383			
Understanding				
Perceived	0.460	0.566		
usefulness				
Motivational drive	0.299	0.419	0.438	
to use YouTube				

The outcome revealed a fine fit to the data with Comparative Fit Index (CFI) =0.930; Tucker-Lewis Index (TLI) = 0.899 (Bentler, 1990); SRMR = 0.069 and RMSEA = 0.073 (Hu & Bentler, 1999).

## Structural model

The RStudio software was used for SEM to test the study hypotheses. The effects displayed under the Table 6, represented below shows that Perceived belongingness affect Perceived understanding (beta=0.275, t= 4.709, LLCI=0.170, ULCI=0.393), Perceived Usefulness ( $\beta$ = 0.315, t= 4.835, LLCI=0.187, ULCI= 0.438) and Motivational drive to use Youtube ( $\beta$ =0.212, t= 3.046, LLCI=0.073, ULCI= 0.343). Thus, supporting H<sub>1</sub>, H<sub>2</sub>, and H<sub>3</sub>. Moreover, the results show that Perceived Understanding affects Perceived Usefulness ( $\beta$ =0.349, t = 5.428, LLCI = 0.217, ULCI = 0.466) and affects behavioral intention to use YouTube, showing ( $\beta$ = 0.329, t = 5.008, LLCI = 0.194, ULCI = 0.456), hence supporting H<sub>4</sub> and H<sub>5</sub>. The Perceived Usefulness of YouTube significantly affects the Motivational drive to use YouTube ( $\beta$ = 0.182, t = 2.772, LLCI 0.056, ULCI = 0.313), supporting H6.

At the end of the structural equation modeling, the degree of ascertainment was calculated using the PLS-SEM approach. The results revealed that the Motivational Drive to use YouTube (MD) and Perceived Understanding (PUD) are affected by 17.1% and 7.6%, respectively. Moreover, the Perceived Usefulness (PU) is affected by 21.2% (Nitzl et al., 2016).

## Table 6

		Beta	Sd	T Statistics	LLCI	ULCI	Decision
H <sub>1</sub>	Perceived Belongingness -> Perceived Understanding	0.275	0.058	4.709	0.170	0.393	Supported
H <sub>2</sub>	Perceived Belongingness -> Perceived Usefulness	0.315	0.065	4.835	0.187	0.438	Supported
H <sub>3</sub>	Perceived Belongingness -> Motivational drive	0.212	0.070	3.046	0.073	0.343	Supported
H <sub>4</sub>	Perceived Understanding -> Perceived Usefulness	0.349	0.064	5.428	0.217	0.466	Supported
H <sub>5</sub>	Perceived Understanding-> Motivational drive	0.329	0.066	5.008	0.194	0.456	Supported
H <sub>6</sub>	Perceived Usefulness-> Motivational drive	0.182	0.066	2.772	0.056	0.313	Supported

## Constructional Representation (Hypothesis testing)

## **DISCUSSION AND CONCLUSIONS**

This study explores the bond that youtube content creators built with their viewers, which will help the users to feel a sense of belongingness with the content on the YouTube, that ultimately increase their understanding and usefulness related to the content and more importantly motivates the users to watch the YouTube content for educational purpose by the rural students. By utilizing the Technology Acceptance Model, the study postulated that usefulness and understanding level of the content motivate users to use the YouTube Platform repeatedly. The video feature of social media platforms serves as an additional educational tool by enhancing comprehension and perceived usefulness. Apart from face learning, this feature will also engage students more effectively by providing a broad picture of the concept (Tsevi, 2025). A mutual learning habitat for educational institutions will help to improve students' academic outcomes and empower them (Okeke & Chukwuma, 2024).

Prior research suggests that psychological belongingness affects digital learning environments (Zheng et al., 2024). This study incorporates a model that emphasizes the impact of perceived belongingness on the learning environment through perceived understanding and usefulness, ultimately fostering a motivational drive to engage with the platform. By offering interactive and visually rich experiences, YouTube helps students feel connected to content creators and peers, thereby increasing their motivation to learn (Jin, 2024). YouTube's ability to provide easily accessible, self-paced learning resources enables students to grasp concepts more effectively, making it a valuable supplement to traditional educational methods (Palaigeorgiou & Papadopoulou, 2019). The study corroborates the work of Istenič (2021), who found that video-based learning enhances students' perceived usefulness of educational technology by providing contextualized explanations.

The research also reveals that perceived understanding motivates the adoption of YouTube as a learning tool. Video-based learning facilitates deeper understanding among students with limited access to traditional classroom settings (Sablić et al., 2021). Beyond individual motivational factors, the study underscores YouTube's role as an auxiliary educational device in rural learning contexts. The platform's accessibility allows students to overcome geographical and institutional barriers, aligning with research on digital education's potential to bridge educational gaps. Moreover, the learning environments can create more inclusive and interactive learning spaces.

#### CONCLUSION

This study provides valuable insights into YouTube's role as an educational tool for rural students, analyzed through the Technology Acceptance Model (TAM). The findings reveal that Perceived Belongingness, Perceived Understanding, and Perceived Usefulness significantly enhance the Motivational Drive of the student to engage with YouTube for learning. A strong sense of connection with content creators fosters deeper comprehension and a more meaningful educational experience, reinforcing YouTube's effectiveness as a supplementary learning platform. It highlights how video-based learning, through interactive and visually rich content, improves perceived usefulness and understanding, thereby increasing student motivation.

YouTube's involvement in education influences students' behavior by enhancing their learning attitudes and empowering them (Darojat et al., 2025). This investigation underscores that YouTube has the potential to bridge educational disparities in rural regions where conventional educational resources are limited. By providing flexible, self-paced, and visually engaging learning opportunities, YouTube empowers students to overcome geographical and institutional barriers. The study focuses on the need for structured digital literacy initiatives to help students maximize the educational benefits of social mediabased learning (Abubakar et al., 2025). By embracing the potential of YouTube and similar platforms, the education sector can foster an inclusive, interactive, and dynamic learning ecosystem that enhances student engagement and academic outcomes.

The study will help educators enhance student interaction and encourage institutions to integrate YouTube into formal education for improved productivity. Educators and policymakers should leverage these insights to merge digital learning platforms into formal education, ensuring equitable access. Additionally, it will support the education sector in developing a student-friendly learning environment that fosters mental growth.

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