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A STUDY ON IMPACT OF DIGITAL MARKETING ON CONSUMER BUYING BEHAVIOUR

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Abstract:
This study investigates digital marketing's influence on VSKU students' buying behavior. A descriptive design with 50 students revealed Online Reviews & Ratings (ORR) significantly impact Consumer Buying Behaviour. Social Media Marketing, Email/SMS, and Website/App Experience showed no direct significant effect. ORR is a key driver in this semi-urban university context.

Key Words: Digital Marketing, Consumer Buying Behaviour, Online Reviews, Social Media Marketing, Student Consumers.

Introduction

The pervasive influence of digital platforms has fundamentally reshaped consumer purchasing patterns, especially among tech-savvy youth. Students are constantly exposed to diverse digital marketing forms, including social media, email/SMS campaigns, online reviews, and website/app interfaces. Despite this omnipresence, limited research exists on how these elements influence consumer buying behavior within higher education institutions in semi-urban areas like VSK University, Ballari. This study addresses this gap by meticulously examining the impact of key digital marketing factors on university students' buying decisions, aiming to understand which elements most significantly drive their consumer behavior in a digitally connected environment.

Review of Literature:

The reviewed literature collectively explores the dynamic landscape of digital marketing and its influence on consumer behaviour. Dwivedi et al. (2021) provide a comprehensive overview of how digital and social media marketing strategies impact various aspects of consumer behavior, emphasizing both academic insights and managerial relevance. Similarly, Anshari et al. (2019) highlight the increasing personalization in digital commerce, stressing that businesses must align their marketing strategies with evolving consumer expectations driven by technology. The work by Verma and Yadav (2021) contributes an empirical Indian context, examining how social media platforms significantly affect purchase intentions, especially among youth. Rathore and Ilavarasan (2020) focus on digital marketing's impact on Indian retail, particularly post-GST implementation, noting increased competition and consumer responsiveness online. Finally, Dash et al. (2021) explore trust in influencer marketing, identifying credibility, attractiveness, and relatability as central to building brand trust and engagement. Together, these studies reinforce the central role of digital mediums in shaping purchase decisions and offer valuable implications for marketers navigating the digital age.

Statement of the Problem:

The growing dominance of digital platforms has significantly transformed consumer purchasing patterns, especially among tech-savvy youth. Students, as active digital users, are frequently exposed to various forms of digital marketing such as social media promotions, email/SMS campaigns, online reviews, and website/app interfaces. However, limited research exists on how these digital marketing elements influence consumer buying behaviour in the context of higher education institutions in semi-urban areas like VSK University, Ballari. This study addresses this gap by examining the impact of key digital marketing factors on the buying decisions of university students, aiming to understand which elements most significantly drive their consumer behaviour in a digitally connected environment.

Significance of the Study:

This study is significant as it explores how digital marketing elements—social media, email/SMS campaigns, online reviews, and website/app experiences—impact the buying behaviour of students in a university setting. By focusing on a digitally active and youth-centric demographic, the findings offer valuable insights for marketers, educational institutions, and researchers to better understand and engage with student consumers in the digital age.

Objectives of the Study:

1. To examine the influence of social media marketing, email and SMS, online reviews and ratings, trust and buying intent and impact of website/app on consumer buying behaviour.
2. To measure the overall relationship between digital marketing strategies and consumer buying behaviour.

Hypothesis:

Code		Hypothesis Statement
H1	**H_{O1}**	Social Media Marketing (SMM) does not significantly affect Consumer Buying Behaviour(CBB).
	H_{A1}	Social Media Marketing (SMM) has a significant positive effect on Consumer Buying Behaviour (CBB).
	H_{O2}	Email/SMS Marketing(EMM) does not significantly affect Consumer Buying Behaviour(CBB).
H2	**H_{A2}**	Email/SMS Marketing (EMM) has a significant positive effect on Consumer Buying Behaviour (CBB).
	H_{O3}	Online Reviews and Ratings(ORR) do not significantly affect Consumer Buying Behaviour.
H3	**H_{A3}**	Online Reviews and Ratings (ORR) have a significant positive effect on Consumer Buying Behaviour (CBB).
H4	**H_{O4}**	Website/App Experience (WAE) does not significantly affect Consumer Buying Behaviour(CBB).
	H_{A4}	Website/App *Experience* (WAE) has a significant positive effect on Consumer Buying Behaviour (CBB).

Research Methodology: This study uses a descriptive research design to examine the impact of digital marketing on consumer buying behaviour among students at Vijayanagara Sri Krishnadevaraya University (VSKU), Ballari. Data was collected from 50 students on the main campus using a structured questionnaire and convenient sampling due to time and budget constraints. The findings may not reflect the wider student population. Analysis methods include frequency analysis for respondent profiles, factor analysis to identify key behavioural influences, and regression analysis to assess the effects of digital marketing on buying behaviour.

Reliability Test:

Table1: Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.970	25

Source: Authors Compiled

The Cronbach's Alpha of 0.970 for 25 items indicates an exceptionally high level of internal consistency and reliability for the measurement scale used. This suggests that all 25 items are strongly interrelated and are effectively measuring the same underlying construct, making the scale highly dependable for research purposes.

Factor Analysis:

Table 2: KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.762
Bartlett's Test of Sphericity	Approx. Chi-Square	1613.737
	df	300
	Sig.	0.000

Source: Authors Compiled

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.762, which is considered good, indicating that the sample is adequate for conducting factor analysis. Bartlett's Test of Sphericity, with an approximate Chi-Square of 1613.737, 300 degrees of freedom, and a significance level (Sig.) of 0.000 ($p < 0.05$), is statistically significant, suggesting that the correlation matrix is not an identity matrix and there are relationships between the variables, thus factor analysis is appropriate.

Table 3: Total Variance Explained

Total Variance Explained									
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	14.663	58.652	58.652	14.663	58.652	58.652	6.872	27.490	27.490
2	2.052	8.209	66.860	2.052	8.209	66.860	4.532	18.130	45.619
3	1.782	7.126	73.987	1.782	7.126	73.987	4.195	16.782	62.401
4	1.117	4.469	78.456	1.117	4.469	78.456	4.014	16.055	78.456

Source: Authors Compiled

Table 4: Rotated Component Matrix

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
CBB5 Digital platforms have changed the way I shop.	0.793			
CBB1 Digital promotions have influenced my recent purchases.	0.789			
ORR1 I always check online reviews before purchasing a product.	0.789			
EMM4 I consider email/SMS updates useful for comparing products.	0.767			
ORR3 Negative reviews discourage me from buying a product.	0.719			
ORR4 I find customer reviews more reliable than company claims.	0.715			
CBB4 I spend more due to targeted digital marketing.	0.711			
CBB3 I compare products online before buying.	0.637			
EMM2 I read marketing emails/SMS before deciding on a purchase.	0.635			
ORR2 Higher product ratings increase my trust in the product.	0.633			
EMM3 Discount codes in emails/SMS encourage me to shop more.				
SMM1 I often come across product advertisements on social media platforms.				
ORR5 I contribute reviews to help others make purchase decisions.		0.826		
CBB2 I make unplanned purchases due to online marketing exposure.		0.754		
WAE1 I prefer shopping from websites/apps that are easy to navigate.		0.732		
WAE2 A visually appealing website/app increases my interest to buy.		0.662		
EMM5 I have purchased a product after receiving a promotional email/SMS.		0.627		
EMM1 I receive regular promotional emails/SMS from brands I follow.			0.779	
WAE3 I abandon purchases if the site/app is too slow or confusing.			0.727	
WAE4 I feel more confident buying from well-designed platforms.			0.660	
SMM4 I follow brands on social media to stay updated about offers.				
SMM5 Influencer promotions on social media impact my purchase decisions.				0.841
SMM3 I trust reviews and opinions shared by others on social media.				0.730
WAE5 Product images/videos on websites/apps influence my decision.				0.604
SMM2 Social media ads influence my interest in trying new products.				
Extraction Method: Principal Component Analysis. ***Rotation Method: Varimax with Kaiser Normalization.***				
a. Rotation converged in 21 iterations.				

Source: Authors Compiled

In the Total Variance Explained table, the initial eigenvalues indicate that four components have an eigenvalue greater than 1, accounting for a cumulative 78.456% of the total variance. Specifically, Component 1 explains 58.652% of the variance, Component 2 explains 8.209%, Component 3 explains 7.126%, and Component 4 explains 4.469%. After rotation, these four components collectively still explain 78.456% of the variance, with the variance distributed more evenly among them, making the interpretation of these components clearer. The extraction method used is Principal Component Analysis.

Table 5: Extraction of KeyDigital Marketing Variables Influencing on Buying Behaviour

Factor Number	Factor Interpretation	Variable included in the Factor	Code	Loading Criteria> 0.60
1	Digital Shopping and Online Reviews	Digital platforms have changed the way I shop.	CBB5	0.793
		Digital promotions have influenced my recent purchases.	CBB1	0.789
		I always check online reviews before purchasing a product.	ORR1	0.789
		I consider email/SMS updates useful for comparing products.	EMM4	0.767
		Negative reviews discourage me from buying a product.	ORR3	0.719
		I find customer reviews more reliable than company claims.	ORR4	0.715
		I spend more due to targeted digital marketing.	CBB4	0.711
		I compare products online before buying.	CBB3	0.637
		I read marketing emails/SMS before deciding on a purchase.	EMM2	0.635
		Higher product ratings increase my trust in the product.	ORR2	0.633
2	Website/App Engagement and Unplanned Purchases	I contribute reviews to help others make purchase decisions.	ORR5	0.826
		I make unplanned purchases due to online marketing exposure.	CBB2	0.754
		I prefer shopping from websites/apps that are easy to navigate.	WAE1	0.732
		A visually appealing website/app increases my interest to buy.	WAE2	0.662
		I have purchased a product after receiving a promotional email/SMS.	EMM5	0.627
3	Email/SMS Marketing and Website Reliability	I receive regular promotional emails/SMS from brands I follow.	EMM1	0.779
		I abandon purchases if the site/app is too slow or confusing.	WAE3	0.727
		I feel more confident buying from well-designed platforms.	WAE4	0.660
4	Social Media Influence	Influencer promotions on social media impact my purchase decisions.	SMM5	0.841
		I trust reviews and opinions shared by others on social media.	SMM3	0.730
		Product images/videos on websites/apps influence my decision.	WAE5	0.604

Source: Authors Compiled

Factor analysis revealed four components influencing consumer behavior. The first, digital shopping and online reviews, reflects the impact of digital platforms (0.793), promotions (0.789), and online reviews (0.789) on purchase decisions. The second, website/app engagement and unplanned purchases, includes writing reviews (0.826), impulsive buying from marketing (0.754), and a preference for easy-to-use, attractive platforms (0.732, 0.662). The third, email/SMS marketing and website reliability, highlights the role of promotional messages (0.779), site performance (0.727), and design confidence (0.660). The fourth, social media influence, is shaped by influencer content (0.841), trust in social media reviews (0.730), and product visuals (0.604). Some items, like discount codes in emails/SMS, did not load clearly on any component. The rotation stabilized in 21 iterations.

Hypothesis Testing:

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	.904[a]	.818	.801	.45297	2.246
a. Predictors: (Constant), WAE, ORR, SMM, EMM					
b. Dependent Variable: CBB					

The regression model shows a strong fit, with an R^2 of 0.818, indicating that 81.8% of the variation in Consumer Buying Behaviour (CBB) is explained by the four predictors: Social Media Marketing (SMM), Email/SMS Marketing (EMM), Online Reviews (ORR), and Website/App Experience (WAE).The Durbin-Watson value of 2.246 indicates no autocorrelation in residuals, supporting the model's reliability. The model is statistically strong and reliable.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.404	4	10.351	50.449	.000[b]
	Residual	9.233	45	.205		
	Total	50.637	49			
a. Dependent Variable: CBB						
b. Predictors: (Constant), WAE, ORR, SMM, EMM						

The ANOVA table shows that the regression model is statistically significant, with an F-value of 50.449 and a significance level (p-value) of 0.000. This means the overall model significantly predicts consumer buying behaviour (CBB), and at least one of the independent variables (WAE, ORR, SMM, or EMM) contributes meaningfully to the prediction.

Coefficients[a]										
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.297	.232		1.279	.207	-.171	.766		
	SMM	-.109	.115	-.108	-.952	.346	-.341	.122	.314	3.187
	EMM	.230	.174	.220	1.322	.193	-.121	.581	.146	6.847
	ORR	.743	.123	.773	6.056	.000	.496	.991	.249	4.023
	WAE	.019	.117	.018	.159	.875	-.217	.254	.320	3.129
a. Dependent Variable: CBB										

Among all predictors, only online reviews and ratings (ORR) have a significant positive effect on consumer buying behaviour (B = 0.743, p = 0.000). Social media marketing (SMM), email/SMS marketing (EMM), and website/app experience (WAE) do not show significant effects, as their p-values are above 0.05. This indicates that ORR is the most influential factor in the model.

Collinearity Diagnostics[a]								
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	SMM	EMM	ORR	WAE
1	1	4.877	1.000	.00	.00	.00	.00	.00
	2	.062	8.864	.98	.03	.01	.01	.02
	3	.028	13.141	.00	.22	.02	.42	.23
	4	.023	14.504	.00	.64	.00	.00	.63
	5	.009	23.089	.01	.12	.97	.57	.13
a. Dependent Variable: CBB								

The condition index for Dimension 5 is 23.089, which exceeds the threshold of 15, suggesting potential multicollinearity. Variance proportions in this dimension show that EMM (97%) and ORR (57%) load heavily here, indicating that EMM and ORR may have multicollinearity issues. This could affect the reliability of individual regression coefficients, even though the overall model is significant.

Code	Hypothesis Statement	Std. Beta	t-value	Sig. (p)	Decision
H1	Social Media Marketing (SMM) has a significant positive effect on Consumer Buying Behaviour (CBB).	-0.108	-0.952	0.346	Rejected (No significant effect)
H2	Email/SMS Marketing (EMM) has a significant positive effect on Consumer Buying Behaviour (CBB).	0.220	1.322	0.193	Rejected (No significant effect)
H3	Online Reviews and Ratings (ORR) have a significant positive effect on Consumer Buying Behaviour (CBB).	0.773	6.056	0.000	**Accepted (Highly significant)**
H4	Website/App Experience (WAE) has a significant positive effect on Consumer Buying Behaviour (CBB).	0.018	0.159	0.875	Rejected (No significant effect)

Findings of the Study:

1. Online Reviews and Ratings (ORR) have a strong and significant positive effect on Consumer Buying Behaviour (CBB) ($\beta = 0.773$, $p < 0.001$).
2. Email/SMS Marketing (EMM) shows a positive but statistically insignificant effect on CBB ($p = 0.193$).
3. Social Media Marketing (SMM) has a negative and insignificant influence on CBB ($p = 0.346$).
4. Website/App Experience (WAE) has minimal impact and is not statistically significant ($p = 0.875$).
5. The overall model is highly significant ($R^2 = 0.818$), indicating that 81.8% of the variation in CBB is explained by the four digital marketing components.

Suggestions:

1. Focus on strengthening online reviews and ratings, as they significantly impact consumer buying decisions.

2. Enhance the quality and relevance of email and SMS marketing to improve effectiveness.
3. Optimize website and app interfaces to offer smoother and more engaging user experiences.
4. Rethink social media marketing strategies to better align with student interests and behaviours.
5. Use insights from student preferences to develop youth-centric digital campaigns.

Conclusion:

The regression model explains 81.8% of the variance in consumer buying behaviour ($R^2 = 0.818$). Among the four digital marketing constructs, only Online Reviews & Ratings (ORR) has a significant and strong positive influence on buying behaviour ($\beta = 0.773$, $p < 0.001$). Other constructs — Social Media Marketing (SMM), Email/SMS Marketing (EMM), and Website/App Experience (WAE) — showed no direct significant impact. This suggests that trust-building mechanisms like reviews and ratings are key drivers in the digital marketing environment, and other strategies may exert influence indirectly or require further contextual study.

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