

A Content Analysis Of User Engagement In Computer Technology Video Ads

Introduction

- 2022 is marked as the year of metaverse and computer technology products are in the trend.
- User engagement among the computer technology video ads have not studied yet.
- What are the relationships between product types, creative strategies, advertising appeals, atmosphere, characters and user engagement in computer technology video ads?

Study Design

- A content analysis study was conducted among 300 technology video ads from top ten tech companies' YouTube channels in the U.S.

Research Questions

In computer technology video ads:

- **RQ1:** What is the relationship between types of technology products and user engagement?
- **RQ2:** What is the relationship between Taylor's six-segment message strategies and user engagement?
- **RQ3:** What is the relationship between advertising appeals and user engagement?
- **RQ4:** What is the relationship between atmosphere (music, voiceover, tone, elevation) and user engagement?
- **RQ5:** What is the relationship between characters (people, diversity, celebrity endorsement) and user engagement?

Results

Table 1. Results of t-tests and Descriptive Statistics for Active Engagements by Eight General Types of Products in the Tech Ads

	User Engagement with Tech Video Ads					
	Yes	SD	n	No	SD	n
Cloud	1.25	1.02	39	1.70	.81	257
VR/AR	1.45	.62	22	1.65	.87	274
Camera/Phone/Computer	1.51	.84	140	1.75	.86	156
Drone	1.01	.79	5	1.65	.85	291
Software	1.61	.66	21	1.64	.87	275
Internet of Things/AI/Smart TV	1.94	.74	89	1.50	.87	207
Network/System	1.46	.49	6	1.64	.86	290
Social Network Site	1.20	.70	71	1.77	.86	225

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3. Summary of Hierarchical Regression Analysis for Ad Appeal Variables Predicting Active Engagement with Technology Ads

	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Days on YouTube	.00	.00	-.02	.00	.00	.06
Ad Length	.01	.00	.23***	.01	.00	.24***
Warmth				-.36	.12	-.18**
Humor				.53	.11	.27***
Fear				-.43	.33	-.07
Family				.11	.14	.05
R ²	.05			.15		
F for change in R ²	7.7 (2, 292)**			8.35 (4, 288) ***		

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 2. Summary of Hierarchical Regression Analysis for Creative Strategies Variables Predicting Active Engagement with Technology Ads

	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Days on YouTube	.00	.00	-.02	.00	.00	-.03
Ad Length	.01	.00	.23***	.01	.00	.22**
Ego				.35	.11	.18**
Social				-.06	.13	-.03
Senory				.03	.12	.02
Routine				-.02	.10	-.01
Acute Need				.42	.15	.16**
Ration				-.00	.18	-.00
R ²	.05			.10		
F for change in R ²	7.7 (2, 290)**			2.7 (6, 284) ***		

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4. Summary of Hierarchical Regression Analysis for Ads Atmosphere Setup Variables Predicting Active Engagement with Technology Ads

	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Days on YouTube	.00	.00	-.01	.00	.00	.00
Ad Length	.01	.00	.22***	.01	.00	.27***
Tone				-.38	.21	-.36
Elevation				.10	.20	.09
Voiceover				-.32	.11	-.18**
Music				-.63	.17	-.21***
R ²	.05			.14		
F for change in R ²	7.5 (2, 293)**			8.05 (4, 289) ***		

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 5. Summary of Hierarchical Regression Analysis for Characters Variables Predicting Active Engagement with Technology Ads

	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Days on YouTube	.00	.00	-.01	-.00	.00	-.03
Ad Length	.01	.00	.22***	.00	.00	.20***
Celebrity				-.31	.13	-.16**
People				.13	.12	.06
Diversity				.20	.12	.12
R ²	.05			.07		
F for change in R ²	7.5 (2, 293)**			2.45 (3, 290) N.S.		

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Discussion

- If the featured technology product belonged to IoT, AI, and smart TV, the user engagement of the video ads was higher.
- If the featured technology product belonged to cloud, camera, and social network site, the user engagement of the video ad was lower.
- Video ads using the ego and acute strategy had higher user engagement.
- Video ads using voiceover, music, and celebrity endorsement had lower user engagement.

