Usability Evaluation of Social Media Platforms: Instagram vs. TikTok

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ABSTRACT

This research uses the System Usability Scale (SUS) questionnaire to evaluate the usability of two major social media platforms, TikTok and Instagram. This study aims to evaluate and contrast the user experience provided by each platform, emphasizing features like overall usability, content discovery, and simplicity of navigation. The SUS questionnaire was given to a sample of users who were invited to utilize both apps. The results show the usability strengths and areas for improvement of each platform. The findings show that although Instagram and TikTok both offer excellent usability, there are notable variations in user satisfaction with content engagement and navigation effectiveness. These results provide guidance on how to improve the user experience on social media sites and recommend specific enhancements for every app.

General Terms

Usability Evaluation, User Experience, Social Media Platforms, Mobile Application Usability, Human-Computer Interaction.

Keywords

System Usability Scale (SUS), TikTok, Instagram, Usability Analysis, Social Media Usability, User Interaction.

1. INTRODUCTION

In the digital age, social media platforms have completely changed how people communicate, exchange, and use information. Platforms like Instagram and TikTok, which have millions of users globally, dominate the social media scene and provide distinctive experiences in content creation, interaction, and discovery. Understanding and enhancing these systems' usability is essential to maintaining user pleasure and engagement as the need for seamless user experiences rises.

The System Usability Scale (SUS), a reputable survey that measures user satisfaction with an application's usability, will be used in this study to assess and contrast the usability of TikTok and Instagram. We aim to determine each platform's advantages and disadvantages through this study, with a focus on interface design, content discovery, and simplicity of use.

This study is driven by the growing importance of user-centered design in digital platforms, where user retention in a competitive marketplace depends on usability. Through an evaluation of TikTok and Instagram user experiences, this research offers insights that can direct enhancements to the design of social media applications.

Important conclusions show that although both platforms have excellent usability scores overall, there are some noticeable variances. Instagram is praised for its consistent and user-friendly layout, whereas TikTok tends to shine in terms of content discoverability and engagement features. These observations help guide suggestions for improving usability and emphasize how crucial user-centered design is to creating satisfying user experiences.

2. METHODOLOGY

This study assessed and contrasted TikTok and Instagram using user experiences with content production, browsing, and interaction using the System Usability Scale (SUS) questionnaire. The following was the structure of the methodology:

2.1 Participants

Ten participants were chosen from among students (18–20+ years old) with prior experience using Instagram and TikTok. This varied sample, which included both frequent and infrequent users, offered fair insights on the usability of each platform.

2.2 Evaluation Procedure

A) Task-Based Interaction:
To evaluate usability in the real world, participants were given tasks to complete on Instagram and TikTok that focused on typical user interactions. Every participant finished the following tasks:

1. Browsing the feed and engaging with the content (for example, by leaving a comment or liking it).
looking for profiles or content.
2. Exploring ways of finding content, including Instagram's "Explore" tab and TikTok's "For You" page.
creating or uploading content, such as a picture or video.
3. Participants were able to engage with essential features through these exercises, which also offered a consistent framework for evaluating usability on both platforms.

B) SUS Questionnaire

Participants are expected to complete the SUS questionnaire for Instagram and TikTok individually. Ten standardized questions with a scale of one to five (1 being "Strongly Disagree" and 5 being "Strongly Agree") are used in the SUS to evaluate usability. A direct comparison of usability was made possible by converting each participant's responses into an overall SUS score for each platform.

Figure 1: The standard System Usability Scale.

2.3 Data Collection

Each platform's total usability score was determined by combining the SUS responses and applying the scoring method to translate raw values into a scale from 0 to 100. The average scores for Instagram and TikTok were then calculated, yielding a numerical usability score. Participants' qualitative input was also gathered to offer more background information and perspectives.

2.4 Analysis Criteria

The analysis criteria focus on:

Overall SUS scores: To evaluate overall usability, compare the average SUS ratings.
Task-Specific Observations: Evaluating how easily participants are using the features for interaction, browsing, and content creation.
Qualitative Feedback: Gathering further feedback on the platform's usability, particularly any issues or noteworthy aspects related to interaction, browsing, and content production.

3. RESULTS AND DISCUSSION

3.1 Qualitative Results

Participants' experiences with each TikTok and Instagram feature were seen and interviewed to gain an understanding of usability in content creation, browsing, and engagement. A summary of the main qualitative findings is provided below:

Participants offered insightful comments about their experiences using Instagram and TikTok, particularly with their experiences with creating, browsing, and interacting with content. Despite receiving positive feedback for their creativity, TikTok's content creation tools turned out to be complex, which resulted in a lower task completion rate (50%) and a longer average duration (110 seconds). On the other hand, Instagram's more straightforward content publishing interface resulted in a marginally higher completion rate (60%) and simpler navigation, although some users wished for more imaginative possibilities. In comparison to Instagram's less dynamic Explore tab, TikTok's For You page engaged users with highly customized suggestions during browsing, resulting in a high task success rate (80%) and shorter average browsing time (148.75 seconds). Instagram's browsing feature, which had a 70% success rate and an average time of 192.14 seconds, was useful yet seemed uninteresting to some users. With a 90% task success rate and an average time of 44.33 seconds, TikTok's distinctive Duet and Stitch capabilities made for a

more community-focused experience. Interaction was seamless across both platforms. Despite being more straightforward, Instagram's engagement features were dependable and very successful, with an average time of 49 seconds and a 100% success rate. According to this feedback, Instagram shines in terms of usability and intuitive design, while TikTok provides a more feature-rich and entertaining experience.

Both TikTok and Instagram had great usability according to the System Usability Scale (SUS) scores; Instagram came up slightly ahead with average scores of 83.75 and 89.5, respectively. Qualitative input revealed clear advantages: While Instagram's simple structure is renowned for quick, easy sharing, TikTok's rich content creation features provide for creative freedom, but beginning users may find the interface overwhelming. While Instagram's Explore tab was useful but viewed as less dynamic, TikTok's For You page was praised for its personalized, captivating recommendations that made surfing a lot of fun. In contrast to Instagram's Reels feature, which is entertaining but was thought to be less involved overall, TikTok's distinctive features, such as Duets and Stitch, encourage a strong sense of community and creativity.

3.2 Quantitative Results

The quantitative results point to significant usability differences between Instagram and TikTok. While TikTok scored lower in content production (50%) because of its more complicated interface, Instagram obtained high task completion rates, with 100% success in login, searching, and user engagement. TikTok's efficiency is demonstrated by average task timings, which show that its design is intended for rapid engagement, particularly when it comes to browsing (148.75 seconds) as opposed to Instagram's 192.14 seconds. Instagram has a slightly superior overall user experience with a simpler and more intuitive UI, according to System Usability Scale (SUS) scores of 82.0 compared to TikTok's 78.5.

Task Completion Rates:

The task completion rates for users on TikTok and Instagram are investigated in this study. The five main tasks— logging in, creating and posting content, searching for content, interacting with other users, and browsing the feed—are the basis for the completion rates. The success rates for each task completed by ten participants are shown in the table below.

Table 1: Instagram Task Completion Rates

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
1	√	√	√	√	√
2	√	√	√	√	
3	√		√	√	√
4	√	√	√	√	√
5	√		√	√	

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
6	√	√	√	√	√
7	√		√	√	√
8	√		√	√	√
9	√	√	√	√	√
10	√	√	√	√	
Success Completion Rates	10	6	10	10	7
	100%	60%	100%	100%	70%

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
3	15s		65s	40s	170s
4	12s	140s	75s	55s	210s
5	6s		55s	35s	
6	7s	150s	80s	60s	220s
7	9s		68s	48s	185s
8	10s		72s	52s	205s
9	12s	115s	63s	47s	175s
10	15s	145s	78s	58s	
Average Total	10.4s	133.33s	68.6s	49.0s	192.14s

Table 2: TikTok Task Completion Rates

Table 4: TikTok Task Completion Rates

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
1	√		√	√	√
2	√	√	√	√	√
3	√	√	√	√	√
4	√			√	√
5	√		√	√	
6	√	√		√	
7	√	√	√	√	√
8	√		√	√	√
9	√	√	√		√
10	√		√	√	√
Success Completion Rates	10	5	8	9	8
	100%	50%	80%	90%	80%

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
1	10s		50s	40s	150s
2	9s	110s	60s	45s	160s
3	11s	100s	55s	50s	140s
4	8s			38s	145s
5	7s		65s	43s	
6	10s	115s		42s	
7	9s	120s	58s	48s	155s
8	10s		60s	47s	148s
9	8s	105s	57s		142s
10	12s		59s	46s	150s
Average Total	9.4s	110.0s	58.0	44.33s	148.75s

Time on tasks:

The average amount of time users spends on Instagram and TikTok to finish the same set of tasks is shown in the data below. The times, which are expressed in seconds, give information about how well each platform performs routine tasks.

Table 3: Time on tasks using Instagram

Participants	Task 1: Login	Task 2: Create and post content	Task 3: Search content	Task 4: Interacting with other users	Task 5: Browse feed
1	10s	120s	60s	45s	180s
2	8s	130s	70s	50s	

Comparison of SUS Scores:

The System Usability Scale (SUS) ratings offer a numerical evaluation of the usability of every platform. The following were the SUS scores based on participant responses:

TikTok: 78.5 is the average SUS score.
Instagram: 82.0 is the average SUS score.
Instagram outperformed TikTok by a small margin, although both apps received great usability scores. Although Instagram's higher score reflects a somewhat better overall user experience, a SUS score above 68 generally indicates strong usability, demonstrating that both apps satisfy user expectations.

Table 5: User Experience using Instagram based on SUS Questionnaire

Participants	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	5	1	5	1	5	2	5	2	5	1
2	5	2	5	1	5	1	5	1	5	2
3	4	2	4	2	5	2	4	2	5	1
4	5	1	5	2	5	2	4	2	5	1
5	4	3	5	2	4	1	5	2	4	1
6	5	1	5	2	5	2	5	2	5	2
7	5	2	5	2	5	2	5	1	4	1
8	4	2	4	2	5	2	5	1	5	1
9	5	1	5	2	5	2	5	2	5	1
10	4	2	5	2	5	2	5	1	5	1

Table 6: User Experience using TikTok based on SUS Questionnaire

Participants	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	5	2	4	2	4	2	5	1	4	1
2	4	3	5	2	4	3	4	2	4	1
3	5	1	5	1	5	1	5	1	5	1
4	3	4	4	3	4	2	4	3	3	2
5	4	2	5	1	5	1	5	2	4	1
6	5	2	4	2	5	3	4	2	4	1
7	4	3	4	2	4	2	5	2	4	2
8	5	2	5	1	5	1	5	1	5	1
9	4	2	5	2	4	2	4	3	4	2
10	5	1	5	1	5	1	5	1	5	1

4. CONCLUSION

Based on usability, this performance analysis compared TikTok and Instagram, looking at interaction, browsing, and content creation. With a higher System Usability Scale (SUS) score of 82.0, which indicates a more user-friendly and accessible interface, the results demonstrated that Instagram excelled in ease of use. Instagram is perfect for people looking for simple content production and browsing because it has high job completion rates in login, searching, and user interaction. With a slightly lower SUS score of 78.5, TikTok provided a more feature-rich environment with its personalized For You page and sophisticated editing capabilities, which led to better engagement and faster browsing speeds. However, decreased content creation completion rates were a result of TikTok's complicated interface, indicating that it should be made simpler.

In conclusion, TikTok's distinctive interactive features and personalized browsing make it incredibly entertaining for creative users, whereas Instagram is better suited for consumers who value simplicity and ease of use. By addressing these findings, both platforms might improve their usability: Instagram by enhancing content customization and TikTok by simplifying content creation.

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