Visualizing Content-based Categorization of Social Media Platforms: A Study of UK Users

Bdour Alwuqaysi, Alfie Abdul-Rahman, Rita Borgo
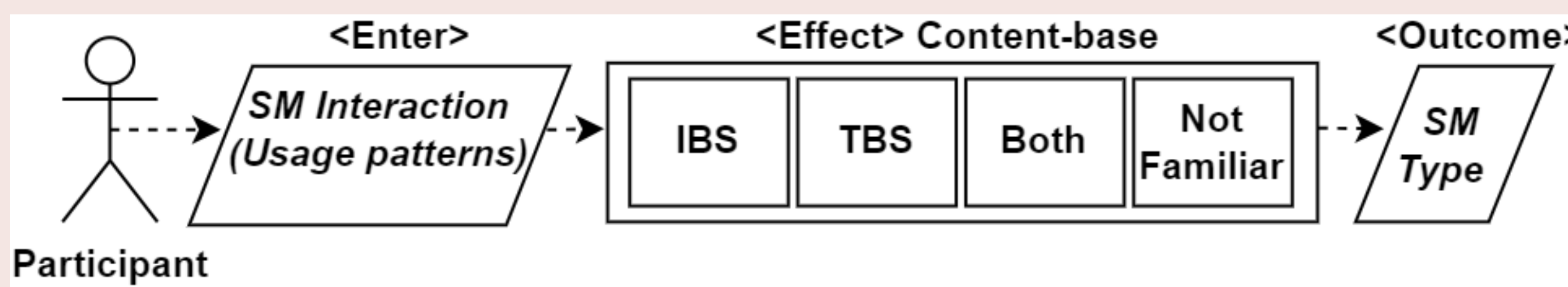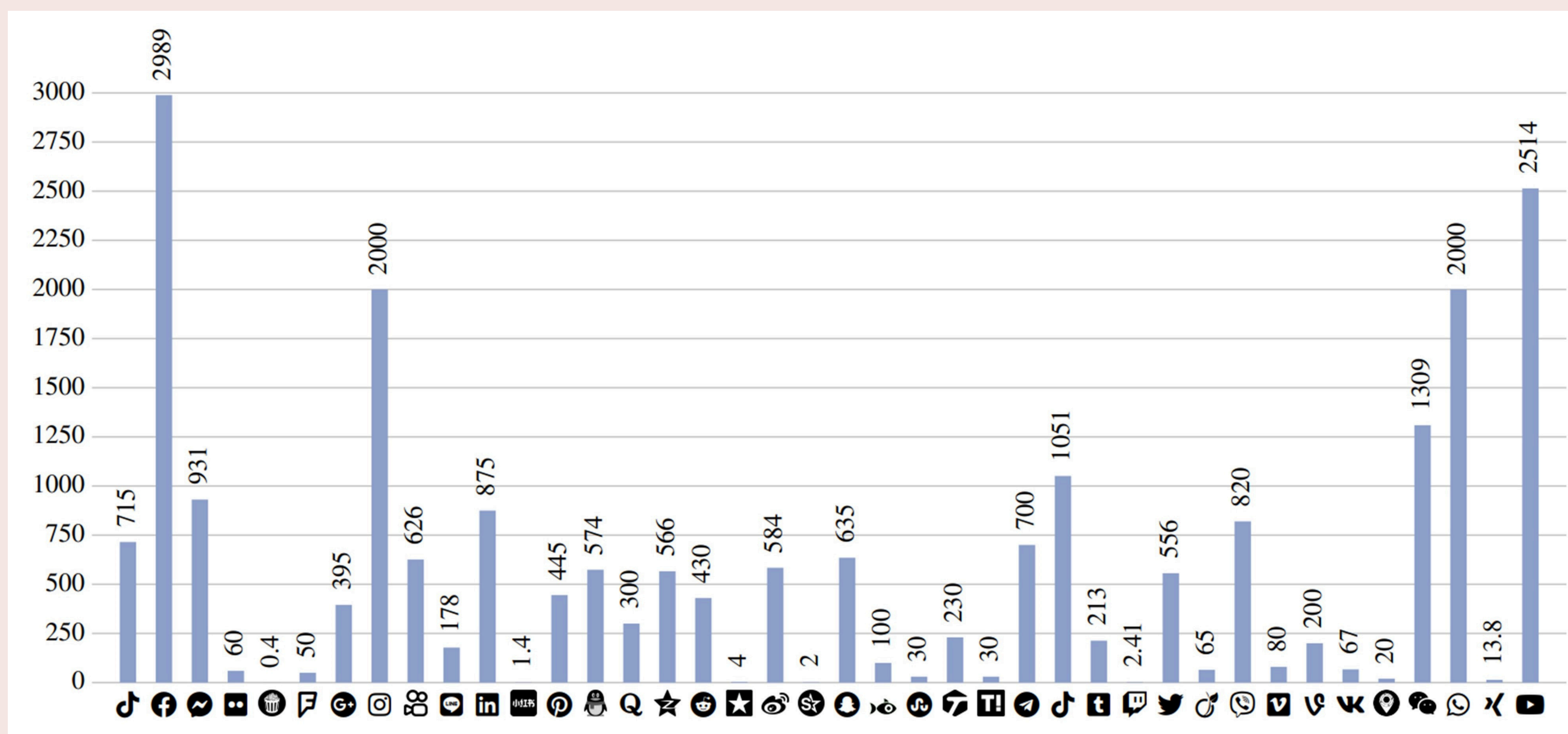
King's College London

Motivation

The impact of Social Media (SM) usage varies by platform and user demographics, yet categorizing these platforms from a user perspective has been largely overlooked [1,2]. Such categorization is essential for understanding user preferences, optimizing marketing strategies, and predicting platform-switching behaviour [3, 4, 5]. With increasing numbers of SM users as shown in Figure 1, understanding how users utilize SM is crucial when studying its effects on individuals [6, 7]. Additionally, visualizing these categories enhances our understanding of popular trends in social networks [8].

Objective

Our primary objective is to examine how users from diverse demographic groups (i.e., United Kingdom users) categorize SM platform types based on usage patterns. This investigation will shed light on dynamic and continually evolving user interactions when categorizing SM platforms. By understanding how users engage with the various content types offered by SM platforms, we aim to provide valuable insights into the unique dynamics of SM usage and its associated impacts.

Fig.1: Monthly Active SM Usage Worldwide in Millions.

Fig. 2: SM Categorization Based on User Usage Patterns.

Tab. 1: SM Minimum Values Sample for Linear Regression Analysis for All Rounds.

Social Media Platforms	95% CI	P value
Douyin	$-0.1654 - 3.9675$	0.052
Foursquare	$-0.2134 - 0.9870$	0.130
Instagram	$-0.7135 - 8.1295$	0.354
Kuaishou	$-0.7391 - 6.0887$	0.093
Nextdoor	$-0.0858 - 7.5354$	0.239
Pinterest	$-0.8671 - 8.6598$	0.143
Qzone	$-0.6481 - 7.4861$	0.163
Reddit	$-0.9682 - 4.3059$	0.359
Reverbnation	$-0.4243 - 1.6543$	0.131
Snapfish	$-0.9781 - 6.9851$	0.111
StumbleUpon	$-0.6978 - 5.6758$	0.237
Viadeo	$-0.5871 - 4.5741$	0.139
WeChat	$-0.6705 - 2.3961$	0.323
YouTube	$-0.9401 - 3.7861$	0.165

CI: Confidence interval, Statistical significance at P-value < 0.05

Content-based Categorization

Participants were asked to categorize SM platforms based on their consumption patterns to:

- **Image-based SM (IBS)**
- **Text-based SM (TBS)**
- **Both text and image-based SM (Both)**
- **Not familiar with the platform (Not Familiar)**

Methodology

Data for this study was collected online using the SM Categorization survey (Refer to the supplementary material link for all of the details of the study). We surveyed 194 participants in 2023. In January 2023, 36 of the most-used SM platforms worldwide were included in the survey's first round with 91 participants. In December 2023, a second survey round was conducted to update the platform list and validate the findings with 103 participants. Additional platforms were included to keep up with the latest developments. 41 globally prominent SM platforms were presented to participants. Five additional platforms emerged and were rapidly adopted between the two rounds, as shown in Figure 3. The survey included demographic questions and a list of popular global SM platforms, and participants were asked to categorize each platform based on their content-sharing/conssummation preferences; Figure 2 illustrates the categorization process. We conducted pilot testing for our survey, applied appropriate statistical analysis to the data as shown in Table 1, and obtained ethical approval from the Research Ethics Committee of King's College London.
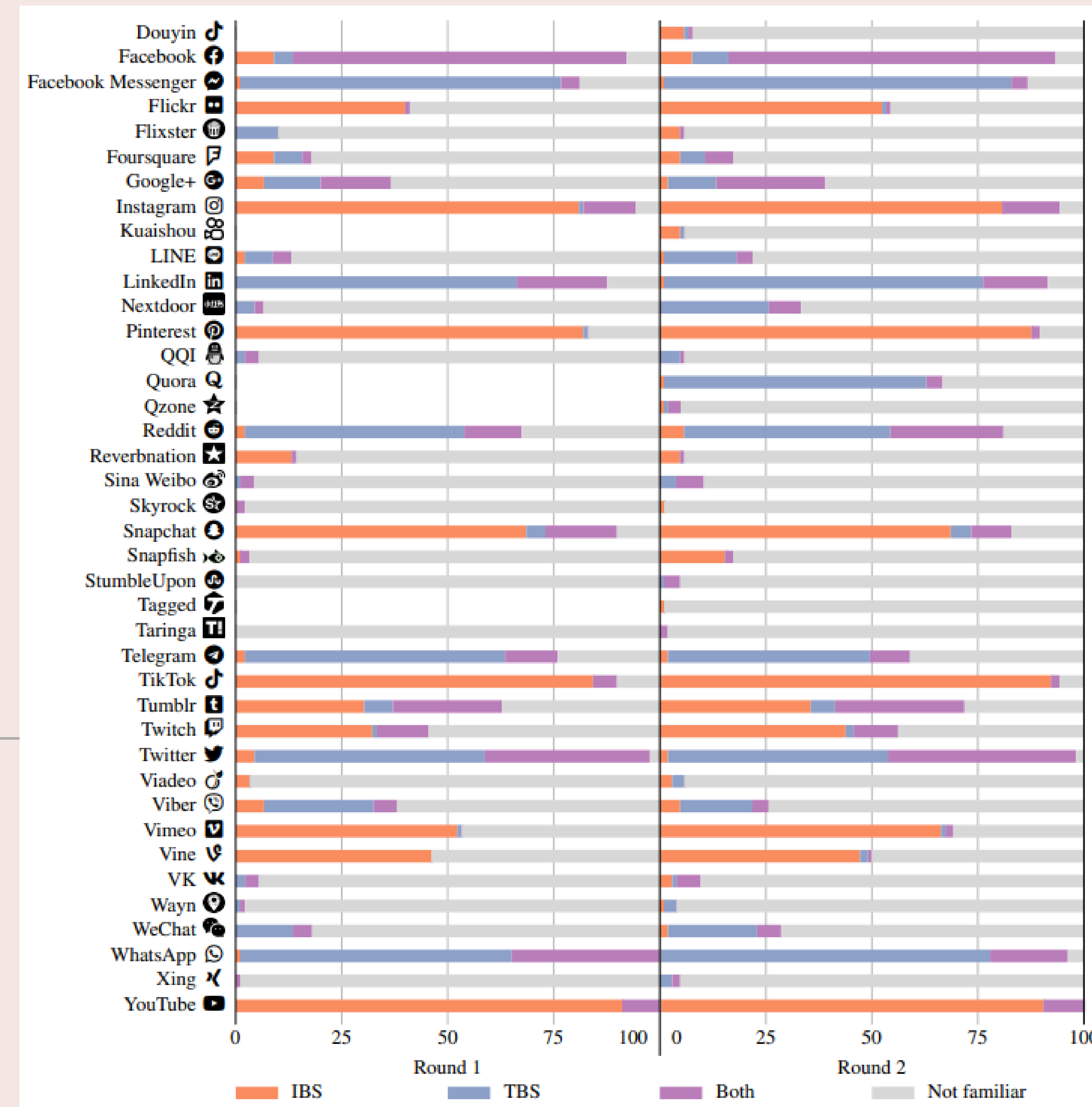

Fig. 3: Visualizing the Comparison of SM Categorization Frequencies: Round 1 vs. Round 2.

Tab. 2: Visualizing the Total Categorization of SM Across All Rounds.

Results

- We broadly categorize SM into four main types: image-based social media, which focuses on images and videos; text-based social media, which relies on written content; and image-text social media, which can be used for both and unfamiliar with this platform.
- We collected a sample of 194 SM users in 2023 to do this. We asked them to categorize the most commonly used SM platforms (e.g., Twitter, Instagram, and Snapchat) from their perspective and based on their usage patterns.
- Our results revealed an overall tendency among individuals to engage in content creation on their SM accounts actively, exhibiting substantial variations in their consumption patterns across distinct platforms.
- The visualization of categorising the most used SM is in Figure 3 and Table 2.
- Users choose SM categories that often match the platforms' planned design purposes. For instance, Instagram and Snapchat are consumed as IBS, while Twitter and WhatsApp are consumed as TBS. However, in some cases, like Tumblr and LINE, the match between the SM category and the platform's planned purpose is unclear.

Conclusion

This research visualizes how users categorize social media (SM) platforms based on usage patterns, showing that preferences drive these categorizations and highlighting the dynamic nature of user interactions. Future studies will explore demographic impacts on these patterns to deepen the understanding of SM usage. Our study categorizes SM content, adapting to changing user behaviors and trends for a dynamic analysis of engagement. This method authentically reflects how users shape platform use, even beyond its original intent.

While based on a UK sample, future research should diversify samples and consider platform features. Despite limitations, this work has implications for SM professionals, policymakers, and researchers by enhancing user experience and enabling targeted campaigns.

SUPPLEMENTARY MATERIAL:

CONTACT INFORMATION:
BDOUR.ALWUQAYSI@KCL.AC.UK

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