The TikTok Strategy: Using AI Platforms to Take Over the World

By Jason P. Davis , INSEAD Associate Professor of Entrepreneurship and Family Enterprise

A curious combination of prediction technology and human censors enables ByteDance to create a dynamic global video ecosystem.

While the BAT – Baidu, Alibaba and Tencent – dominate internet browsing, e-commerce, messaging and gaming in China, one kind of success has eluded them so far. Despite their might, they have yet to gain much ground beyond China, with the possible exception of **Alibaba in Southeast Asia**. Recently, though, a newer Chinese big tech firm, ByteDance, has managed to secure vast consumer markets *on a global scale* with its video platform, TikTok.

Hugely popular with teenagers and millennials, TikTok – known as DouYin in China – is a social media application used for creating and sharing short videos. Lasting 15 seconds or less, the typical clip features fun music, a skit, lip-sync, dance or light-hearted humour. Users often participate in "challenges" or create "duets", i.e. videos with split screens built on existing content. The app has been downloaded more than **one billion** times so far, with a global footprint including India, the United States, Japan, South Korea, European nations, Brazil and much of Southeast Asia. In the first quarter of

2019, it was the third **most downloaded app in the world** after WhatsApp and Messenger.

TikTok is a consumer AI success story, as I explain in my upcoming case study, "**ByteDance Beyond China: Leveraging Consumer Artificial Intelligence (AI) from Toutiao to Musical.ly and TikTok**", co-written by Minh H. Vo, INSEAD PhD candidate, and Anne Yang, INSEAD Research Associate. TikTok relies on AI technology in two ways. First, on the consumer side, its algorithms quickly learn individual preferences, as they capture not only the users' "likes" and comments, but how long they actually watch each video. As the clips are very short, TikTok's algorithms quickly build sizeable datasets.

Secondly, on the producer side, AI also helps content creators craft viral videos. It simplifies video editing and suggests music, hashtags, filters and other enhancements that are trending or have been proven popular based on the category.

This AI recipe is so effective that experts have **cautioned** against TikTok addiction. Similar to Facebook and Instagram users, the average TikTok user spends **52 minutes** per day on the app. In that timeframe, they may watch more than 200 videos, including carefully targeted ads or offers.

In short, ByteDance combines prediction-based AI and network effects on its vibrant multi-sided platform. More and more users join for a highly personalised stream of content they find addictive, and ever more producers join the ecosystem to create these quickly trending videos. Advertisers and vendors follow with well-targeted ads and offers. AI tightens the connections between players so that each can find a valuable niche in a thriving community. It is perhaps no wonder that the company became, in November 2018, the world's **most valuable start-up**, estimated at US$75 billion, one year after TikTok's international launch.

Growing pains: AI-based platforms can be victim of their own success

However, growing at breakneck speed isn't without difficulties. AI-enabled content consumption and production generate their own problems as inappropriate content is sometimes created and delivered to users. In China, **Bytedance** has paid fines for pornographic content and fraudulent ads. In the US, the company paid a record fine of US$5.7 million in February this

year to settle a charge that it had failed to seek parental consent before collecting personal data from users under the age of 13. According to a **statement** by the Federal Trade Commission, the company willingly chose to "pursue growth even at the expense of endangering children".

Out of similar concerns, India banned TikTok from its app stores in early April this year after one of its high tribunals deemed the app encouraged pornography and other illicit content. The court also warned that the app could expose children to sexual predators. The ban was reversed within the month but led TikTok to pull 6 million videos from its platform and quickly introduce content moderation features for the Indian market. Likewise, in Indonesia, the government blocked access to the app in early July 2018, claiming that it featured pornographic and blasphemous content.

ByteDance crafted an interesting solution to these problems. Of course, it applies AI-based filtering of inappropriate content. But even a 99 percent effective solution allows thousands of inappropriate videos to seep through. Its solution, therefore, is a unique hybrid of AI and human censorship, in which thousands of employees monitor videos with AI-based tools. This curious solution has gone global, as the firm has established local content monitoring units in other countries, including Indonesia where a staff of 20 now **filters** videos based on local regulations and cultural values.

The emerging TikTok strategy: Leveraging AI for global platform dominance

ByteDance seems to have found a winning format. Its platform calls for very short videos, letting more users easily create content. It leverages AI not only for the production of videos, but for their delivery as well. Users do not even need to specify their preferences when they join the platform. AI algorithms immediately get to work analysing their behaviour and delivering content, as opposed to simply making recommendations. In very little time, they learn enough to make stunningly accurate predictions about which videos will catch a user's interest. In a way, TikTok soon knows users better than they know themselves as behavioural preferences may differ from stated desires. This drives user engagement – exactly the kind of audience advertisers and vendors are after.

However, inappropriate content is rife on media platforms. When an ecosystem of user-generated content takes off, monitoring problems scale with it. This is even more true when an app is, in fact, designed to quickly

surface the most popular content. Of course, AI can be used to filter most inappropriate content, but technology will never be perfect. Even if a tiny percentage of questionable content percolates through, it can still mean thousands of videos. The TikTok solution combines AI and human censorship in a way that is specific to each national culture.

While ByteDance is still learning along the way, it has made astounding progress since it launched TikTok for an international audience in September 2017. Until now, the BAT trio were so dominant that no one expected a tech start-up to rival their success. ByteDance has defied conventional wisdom with its clever AI-based video-sharing platform. Who knows what new applications it may find in the future for its AI capabilities?

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