Question Type: Analytics

Duration: 20 Minutes
Difficulty: Medium
Domain: Product

Problem

Currently users on LinkedIn can publish posts with texts only. Should LinkedIn create a new feature that enables users to publish videos?

Solution

> Currently, users on LinkedIn can publish posts with texts only. Should LinkedIn create a new feature that enables users to publish videos?

[Candidate] Ideally, a new feature should increase engagements on LinkedIn. I think any feature that increases daily active users (DAUs) and daily time spent per users should be considered for development.

[Interviewer] Okay, how would you use data to validate that a product should be developed?

[Candidate] I am considering one of three options: experimentation, survey and proxy feature.

[Interviewer] Can you elaborate?

[Candidate] Certainly. Here's my breakdown of each method:

Methods	Procedures	Pros	Cons
Experimentation	Conduct an A/B testing on two groups - control and variation with the video feature - to evaluate statistical significance on a primary metric.	-- Establishes causality	-- Expensive to run given the feature needs to be developed. -- Not always practical to remove network effect
Survey	Dispatch a survey to ask whether users would like a video-sharing feature.	-- The simplest approach to evaluate a new feature demand.	-- Responder bias -- Users don't always know what they want
Proxy Feature	Identify an existing behavior that serves as a proxy for a new feature.	-- User data already exists for analysis	-- The proxy feature may not accurately reflect the new feature.

[Interviewer] Okay, which approach would you choose?

[Candidate] I see the proxy feature as the best approach. The proxy feature for a post with videos could be an existing post with links to external video platforms such as YouTube and Vimeo. Given that the platform usage data readily exists, the business question can be readily addressed. An experimentation cannot work given that you can't isolate the new feature to the experimental group given that a post is published on a feed for all users. The survey is not ideal given that users do not always know what they want. Hence, the proxy feature is the best technique.

[Interviewer] What metrics would you look at when using the proxy feature?

[Candidate] Given that the feed is a two-sided feature with publishers and viewers, I would assess the following metrics:

Publisher Metric - Number of posts with external video links
Viewer Metric - Number of clicks to the external video links

[Interviewer] What would those metrics convey?

[Candidate] The publisher metric evaluates whether there are large enough posts with links to justify a video-sharing feature. The viewer metric evaluates loss of engagement to external platforms. If these two are high enough, let's say at least 3 - 5% of posts contain external links and the average number of clicks per links is at least 10 - 50 then that supports the need for the new product feature.

Interviewer Comments

The candidate understands various methods of measuring the demand for a new feature. As the candidate mentioned, in a survey, asking a user if a feature should be built is not the best way to build a product. The better approach is to analyze current user behavior that serves as a proxy for a new feature. If users already share videos links from another platform, the demand for the video sharing feature exists.

Interviewer Assessment

In the statistics section, a candidate is assessed based on correctness and soundness of statistical methodology, product sense and communication. For each dimension the candidate is rated in the following scale: (5) superior, (4) good, (3) adequate, (2) marginal, (1) not competent.

Assessments	Rating	Comments
Statistical Methodology	5	The candidate is familiar with various methodologies to testing a new feature. He proposed experimentation, surveys and proxy features which are all methods applied in LinkedIn. He provided a thorough analysis on the pros and cons of each approach to justify the proxy feature. He also identified a sound proxy for gauging a video post.
Product Sense	5	The candidate demonstrated decent sense on LinkedIn product and metrics. He provided sound metrics (publisher and viewer metrics) to evaluate the proxy feature.
Communication	5	The candidate's response was comprehensive and clear. He illustrated his pros/cons analysis on a table and explained his points in an easy-to-follow manner.