



FANDOM

Fantastic AB tests and how to run them

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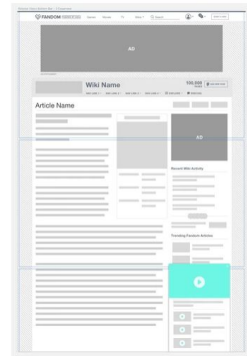
Agenda

- **Goal of AB testing**
- **Value of AB testing**
- **Planning the AB tests**
- **Issues of AB testing**

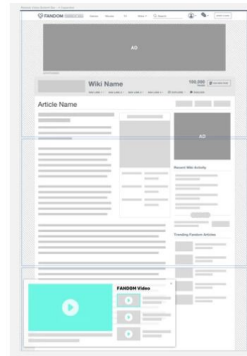
Goal of AB testing

- In web analytics, A/B testing (bucket tests or split-run testing) is a controlled experiment with two variants, A and B.
([Wikipedia](#))

Right side bottom autoplay adhesion with mini-playlist



Left side bottom autoplay adhesion with mini-playlist



Recommended videos

What can be tested?

- User interface change
- Back-end change
- New algorithm (e.g. recommendation algorithm)
- Different business model (e.g. priority of ad products)

Small changes are always easier to understand!

Value of AB testing

- A/B testing is used to develop and identify **better value propositions**.
- When the variants run concurrently, only two things could explain a change in metrics:
 - The “feature(s)” (A vs. B)
 - Random chance
- **Real web users** and their actual interactions with your site.

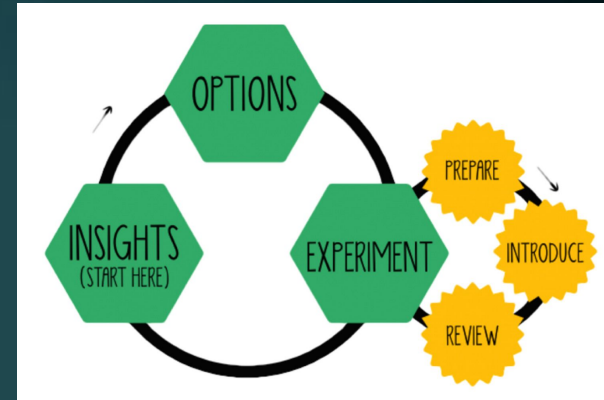
Value of AB testing

Opportunity for better/faster development:

- Iterate rapidly
- Fail fast
- Pivot

We can learn:

- which tiny changes can have impact
- how much should we invest in this particular project

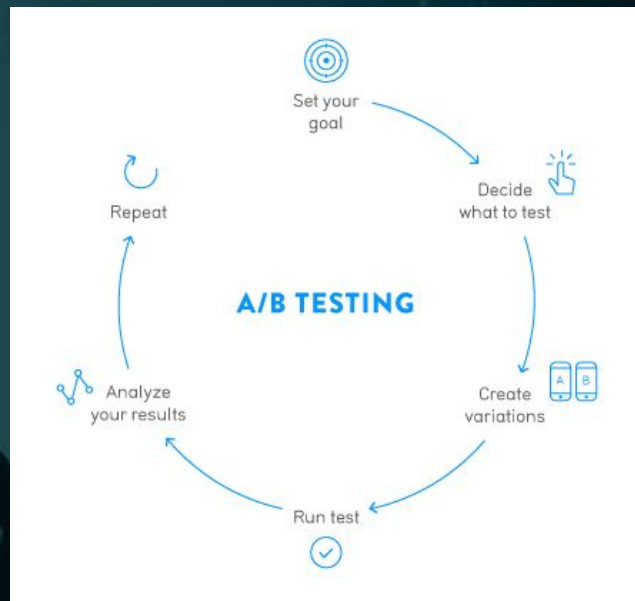


[source](#)

Steps of AB testing

Steps of AB testing

1. Plan the experiment
2. Implement
3. Run
4. Analyze the data
5. Decision making



[source](#)

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[source](#)

1. Plan

Theoretical/product planning

- Determine your goal
 - **Business objectives** (we want Fandom to be the page to visit to watch game-related videos)
 - **Website goal** (engage user to watch multiple videos)
 - **Key performance indicator (KPI)** (user video-content engagement)
 - **One metric** (videos watched/month/user)
- Define an idea - how to reach the goal?
- Define the success - how do we know whether we reached it?
 - Both positive and negative impacts

1. Plan

Technical/data planning

- Define target of the experiment
- Define time lapse
- Define group size



The image features Iron Man in his iconic red and gold suit, standing in a heroic pose with his right hand raised, palm facing forward. The background is a vibrant blue with a halftone dot pattern and diagonal light blue streaks. Overlaid on the center of the image is the text "What can possibly go wrong?" in a bold, yellow, sans-serif font.

**What can
possibly go
wrong?**

Issues of AB testing

Expecting life changing differences – not all of our ideas will result in great outcome

- “Google ran approximately 12,000 randomized experiments in 2009, with [only] about 10 percent of these leading to business changes” was stated in [Uncontrolled](#) by Jim Manzi
- “80% of the time you/we are wrong about what a customer wants” was stated in [Experimentation and Testing: A Primer](#) by Avinash Kaushik

Issues of AB testing

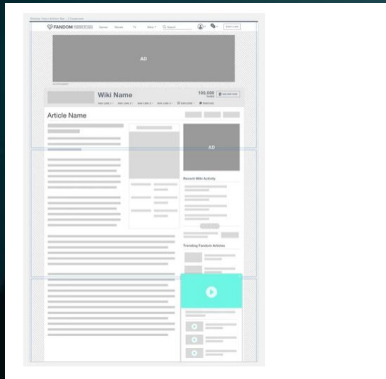
Failing to agree on a good **Overall Evaluation Criterion (OEC)**

- Was the test a success?
 - Yes, we increased number of users viewing multiple videos :-)
 - No, we decreased pageviews and revenue as users watch many videos on same pageview :-(

Issues of AB testing

Carryover effect is when one experiment influence different following experiment.

Example:



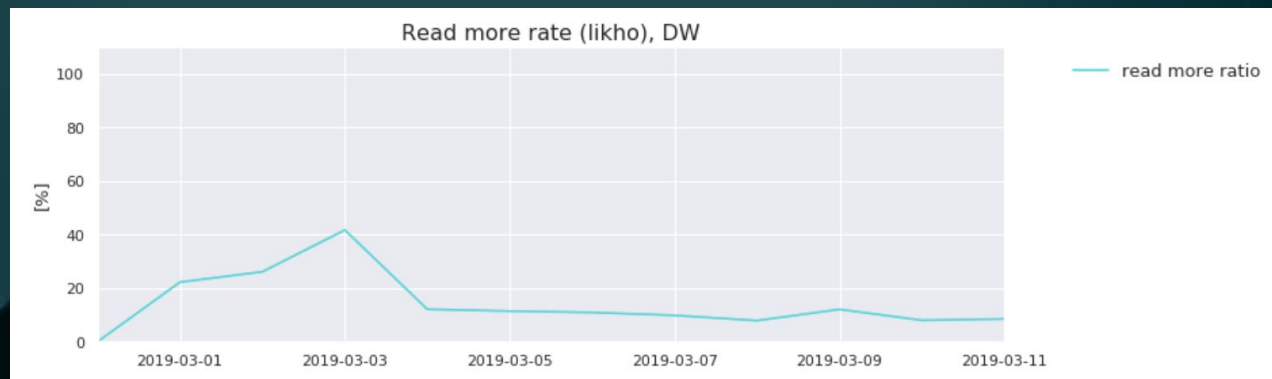
Experiment 1: Users were interested in video recommendations but recommendation algorithm was not perfect and users got discouraged

Experiment 2: video recommendation algorithm is improved but users are not eager to test it

Issues of AB testing

Novelty effect

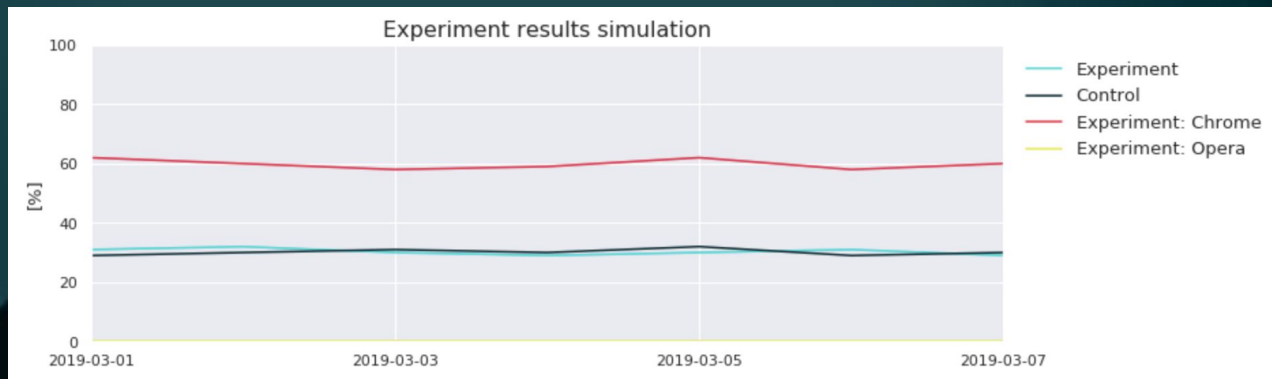
Users react to the introduced change because it's new and different and not because it's engaging.



Issues of AB testing

Heterogeneous treatment effect

Single segment can skew the average enough to invalidate results, e.g. users using distinct browser that experience JavaScript bug



The image features Zidane Tribal, a character from the video game Final Fantasy IX. He is depicted in a dynamic, action-oriented pose, leaning forward with his right leg extended. He wears his signature red hooded robe with a long, pointed hood, red gloves, and red boots. He holds a large, ornate shield on his left arm and a sword in his right hand. The shield is primarily red with gold-colored decorative patterns. The background is a vibrant blue with a halftone dot pattern and diagonal lines. Overlaid on the image is the text "We can overcome it all" in a bold, yellow, sans-serif font.

**We can
overcome it all**

Solving issues of AB testing

Understanding that we think differently than our users

Communication during experiment planning (Engineers < Product > Analysts)

Good analytical team and automatization tools

Doing AB tests and **learning** from them

A 3D rendered Super Mario character in a dynamic pose, wearing his signature red cap with a yellow 'M', red overalls, and red shoes. He is running or jumping towards the viewer with a determined expression, his right arm raised in a fist and his left leg forward. The background is a vibrant blue with diagonal stripes and a halftone dot pattern.

**Go and be data
driven!**



Thank You

BTW we are hiring:
<https://www.fandom.com/careers>