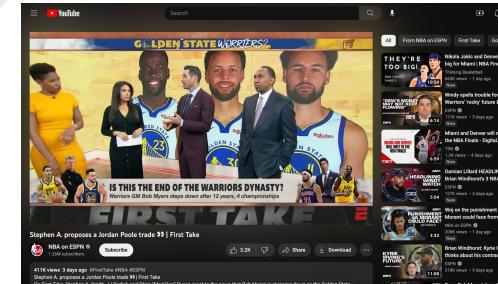


Experiment Review: Automatic Full Screen vs Default Small Screen**Analysis Question:** Should we launch the full screen treatment to all users?**Success Metric:** Watch_time_per_session**Experiment Context**

The goal of this experiment is studying the effects of shifting the default video playing option to a full screen view with automatic next video playing. This removes the catalog of videos seen on the right side, but immediately immerses the user into a full screen view. The initial hypothesis is that an automatic full screen view will lead to gains on the topline metric: watch_time_per_session.

Control Group

Users within the control group see the default Youtube experience today. There is a smaller screen video player, with the regular Call to Action tray (comments, likes, shares) along with a right-side catalog of videos.

**Treatment Group**

Users within the treatment group are automatically sent to the full screen viewer. The number of clickable interfaces goes down dramatically, but in exchange, the user is fully immersed into the video. Auto player is turned on, so the next video will automatically play after this video completes.

**Experiment Specifications**

Sample Size: 10000

Control to Treatment Ratio: 1 to 1

Dates: 5/15/2023 - 5/24/2023

of Key Metrics tracked: 5

Results

Metric	Absolute Delta (95% confidence Interval)	% Delta (95% confidence Interval)	Statistical Significance
Watch_time_per_session <i>seconds</i>	[-1090, -1051]	[-50%, -11%]	Stat Sig Decrease ➔
Watch_time_per_video <i>seconds</i>	[494, 501]	[79%, 86%]	Stat Sig Increase ➡
Clicks_on_webpage	[-3.31, -3.20]	[-50.7%, -50.5%]	Stat Sig Decrease ➔
Videos_completed_per_session	[-3.08, -2.99]	[-60.4%, -60.2%]	Stat Sig Decrease ➔
Pause_count	[-0.34, 0.44]	[-57%, 21%]	Neutral, no stat sig change ↔

Analysis

Among the 5 key metrics considered, 4 found statistical significant changes, proving that the treatment has significant downstream impacts on the user experience.

Watch_time_per_session decreased ➔: This suggests that the automatic full screen view is causing users to spend less time watching videos during a single session. It could indicate users are finding it more difficult to discover relevant videos to watch. In this product experience, users either have to click out of the full screen to choose the video of their choice or depend entirely on YouTube's autoplay algorithm to select the new video. This metric drop pushes the team to consider the efficacy of the autoplay algorithm: perhaps, it is worth further investigating if this autoplay algorithm can be improved. The data shows that the autoplay method is inferior to the user choosing the next video. The next stepwise increase in watch time can be unlocked when the autoplay video selection reaches parity with what the user would have chose.

Watch_time_per_video increased ➡: This indicates that users are spending more time on individual videos when taken to the full screen viewer. It could imply that users are finding videos that capture their interest and encourage them to

watch for longer durations. It could also indicate that when all distractions are removed, users tend to watch a higher percentage of their videos. Another likely explanation is that users with an automatic full screen are more likely to watch longer videos to completion, which may not be the case if they were presented with other video options at the same time. If this is topline metric that the team singularly cares about, then the results would indicate a surefire launch of this feature because it confidently increases watch time per video.

Clicks on webpage decreased ↘: This metric is a simple counter metric that documents: pausing, selecting another video, commenting, liking, scrolling down, and even toggling video settings. Since this metric is a composite of many signals, it is important to stay cautious when drawing conclusions and isolate the specific sub-signal when possible. The decrease in webpage clicks suggests that users are accessing fewer pages during their browsing sessions. This might indicate that users are very susceptible to the lack of video catalog and clickable interfaces. They are less inclined to exit the video viewer session and interact with the other features on YouTube.

Videos completed per session decreased ↘: The decline in completed videos per session indicates that users are not finishing as many videos in one session as they previously did. Although this could be due to various reasons, such as a decrease in video quality, relevance, or user engagement, it is likely that the users are not satisfied with the next video that is being autoplayed.

Pause count showed no significant change ↔: The neutral change in pause count suggests that the frequency of pausing videos during playback has remained relatively stable; the treatment does not affect this metric at all. This metric alone doesn't provide much insight into user experience changes but could be valuable when combined with other metrics for deeper analysis.

Final Takeaways & Recommendations

The team's topline metric is watch_time_per_session; all product changes should be evaluated in this currency. For users in this experiment, the “automatic full screen” feature change view decreased overall watch time, presumably because they clicked on less links, and watched fewer videos in each session. Viewers did watch longer videos and spent more time on each video. However, it is likely that the autoplayer’s video choice is not meeting the quality bar users are expecting.

Conclusion: We recommend NOT to launch this treatment to all users.

Since the topline metric in consideration is watch time, this specific feature is a detriment to the team’s northstar goal. If the focus of this experiment was to increase watch time per session, there needs to be another feature that accomplishes this task because the treatment is too expensive (in terms of watch time) to be rolled out to all users.

Next Steps:

1.  Autoplay video selection algorithm needs to be improved
2.  Further logging is needed on the type of webclicks
3.  Additional treatments that blend in more clickable interfaces within the full screen view should be explored