

Streaming Services: Usability and User Experience

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Introduction:

The days of searching through TV guides and running home to catch your favorite show air in time are coming to an end. Most people around developed countries now have access to thousands of TV series, movies and documentaries from the click of a button, in the comfort of their own homes. What is the reason for this dramatic change we have seen over the last decade? The answer is simple, streaming services. In today's world, streaming services such as Netflix, Hulu, Amazon Prime Video, HBO NOW/GO and more are dominating the entertainment market and making basic cable a thing of the past. As opposed to paying for monthly cable packages, many people in developed countries across the globe can simply subscribe to a streaming service that contains content of their interest, at a price that fits their budget.

The purpose of this paper is to inform the reader of the increasing relevance and market dominance of streaming services, the usability of streaming services, and the success or failure of certain streaming services based on user experience and various interface features.

The Number Crunch:

According to statista.com, as of 2019, Netflix dominates the streaming market with a whopping 46.55 million monthly average users. Followed by Hulu with 26.48 million monthly users and then Amazon Prime Video with 16.46 million monthly users (Watson, 2020). What causes this disparity among subscriptions? Is it strictly because of the content variations? Is the interface in one service far more preferable than the other services?

Netflix has become a household name over the last decade. Netflix offers users a basic subscription starting at \$7.99 a month, this is one of three types of subscriptions. Depending on the subscription, Netflix allows users to stream on multiple devices. Netflix includes a wide collection of box office movies, independent films, popular TV shows, and Netflix Originals. This unique array of content plus the relatively low monthly subscription cost is the first thing that attracts users. Netflix has a highly advanced algorithm that delivers accurate recommendations to users based on their previously viewed content. This keeps users satisfied and ensures that they continue to use Netflix for their binge-watching needs. Another great feature is that Netflix does not bombard users with advertisements, users really appreciate that. Netflix generated approximately \$20.15 billion in revenue in 2019.

Hulu offers a basic subscription for \$7.99 a month but also offers Hulu Live. Hulu Live is a TV plan similar to a premium cable package and is offered at \$39.99 per month, but with no cable box required. Hulu Live sponsors and advertises their platform through the help of famous athletes such as Damian Lillard, Joel Embiid and Giannis Antetokounmpo. Hulu Live's new weapon in their battle with cable companies only furthers their presence in the entertainment market. In 2019, Hulu generated approximately \$2 billion from subscriber and advertisement revenue (Media Post – Friedman, 2019).

Another feature similar to Netflix that Hulu has developed are Hulu Originals. The concept of Netflix and Hulu Originals is financially controversial. The Netflix and Hulu Originals allow both companies to save millions on licensing costs and also increase subscriber income, over the long term (The Motley Food - Lovely, 2020). However, according to a Forbes model, users still prefer viewing licensed content as opposed to original content.

Figure 3: Licensed Content Use Dominates Original

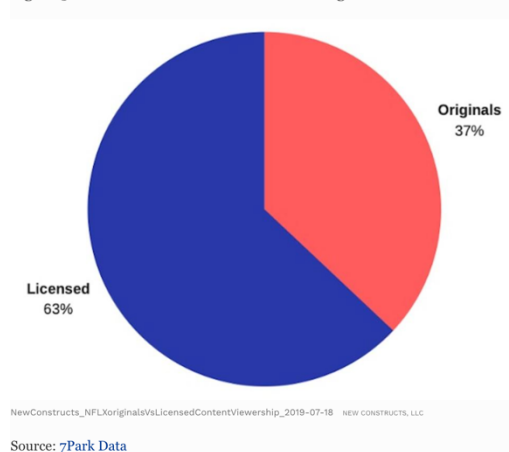


Figure 4: Most Streamed Shows on Netflix in the U.S. for November 2018

RANK	TITLE	STUDIO
1	THE OFFICE (U.S.)	NBC
2	CHILLING ADVENTURES OF SABRINA	NETFLIX
3	FRIENDS	Warner
4	GREY'S ANATOMY	ABC
5	HOUSE OF CARDS	NETFLIX
6	THE GREAT BRITISH BAKING SHOW	NETFLIX
7	MARVEL'S DAREDEVIL	NETFLIX
8	NARCOS: MEXICO	NETFLIX
9	THE HAUNTING OF HILL HOUSE	NETFLIX
10	CRIMINAL MINDS	CBS

NewConstructs_MostStreamedShowsOnNetflix_Nov2018 NEW CONSTRUCTS, LLC
Source: 7Park Data

Figure 3 and Figure 4, found on <https://www.forbes.com/sites/greatspeculations/2019/07/19/netflixs-original-content-strategy-is-failing> show that although subscribers are viewing original content, licensed content is still preferred by most users.

Amazon Prime Video offers users two subscription options: 1) if a user is already an Amazon Prime subscriber, they have an automatic subscription to Prime Video included. 2) Users can subscribe solely to Amazon Prime Video for \$8.99 per month. Amazon Prime contains exclusive content but also has different licensure deals than Netflix and Hulu. Amazon Prime Video allows users to rent or buy newly released content that may not yet be available on other platforms. Amazon Prime Video generated approximately \$1.7 billion in revenue in 2019 (Market Realist – Rogers, 2019).

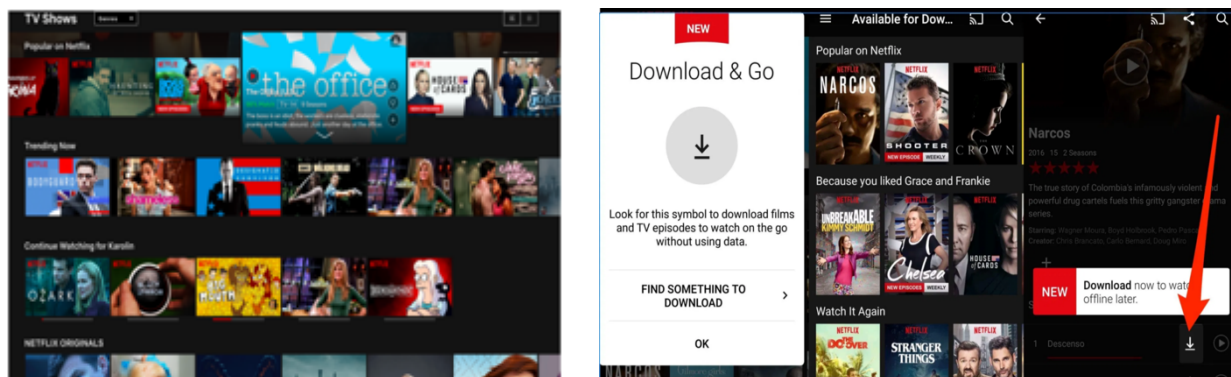
HBO offers two forms of streaming for their users: 1) if a user already pays for HBO in their cable package, they are entitled to an HBO GO subscription that does not require additional charges, it only requires them sign in using their cable subscription credentials. 2) Users can purchase an HBO NOW subscription for \$14.99 per month, with the option to cancel at any time. HBO owns all of their content. This means that they do not have to spend excess money on outsourcing licenses for movies, series or documentaries. According to statista.com, HBO generated approximately \$5.81 billion in subscription revenue in 2019 (Watson, 2020).

Usability and Interface Features:

There are many ways to define usability in the context of software. The International Organization for Standardization (ISO) defines usability as “the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use” (ISO, 1998). This definition aligns with streaming service software attributes because effectiveness, efficiency and satisfaction are some of the most prioritized target qualities users need from their streaming service, other than desired content. In other words, usability describes how easy an interface is to use and how easy it is for users to achieve their desired goals on the interface. The three categories of usability that will be covered in this section are 1) learnability, 2) efficiency, and 3) memorability (Katz, 2019).

Netflix is not only known for being one of the main frontrunners and pioneers of the streaming service industry, but also for its highly regarded user interface. Whether it is being used on a mobile phone, tablet, laptop or TV, Netflix has proven to be consistent across all devices. This improves learnability because consistency helps users become more comfortable with an interface; increased comfortability with an interface generally yields more consistent and satisfied usage. Users can create personalized accounts which allows Netflix to keep record of previous and current content watched, as well as make personalized recommendations for the users based on their viewing history. These factors contribute to Netflix’s high learnability. The next category is efficiency, Netflix scores high in this category as well. Netflix allows users to skip intros in all content they provide. This is a major perk for users who do not want to spend time watching intros because it allows them to get straight to the content they actually enjoy watching. Netflix allows users to download content and stream without network connection or cellular data. This is a great feature for users who travel a lot or do not have access to the internet

or cellular data throughout the day. One of the more unique features Netflix provides is that when it detects inactivity for a prolonged time period, it pauses the stream and prompts users to answer if they wish to continue watching or exit. This feature is ideal for people who are keeping busy while watching or for people like myself, who frequently fall asleep while watching Netflix content. Netflix also provides trailers for content in two ways, with the user highlighting a specific title tile or with the user selecting 'play trailer'. Another feature Netflix hits with regards to both efficiency and memorability is that it saves the user's progress automatically in any show or movie they stream. This saves users the hassle of trying to remember which episode or part of the episode they last watched. Netflix also makes accurate recommendations to users on content, this feature is critical in keeping users engaged and interested with their available content. As you can see in the bottom image, Netflix's consistent navigation bar easily provides users the option to browse content based on category, use Bluetooth to cast content on a different device using Apple Air-Play or Google Chrome-Cast, search content, go back to previous pages and share content. The interface also makes it clear to users which items are downloadable with the universal download icon. The features Netflix offers only reinforce the usability components of learnability, efficiency and memorability while also showcasing how intuitive, intelligent and user friendly the Netflix software is.



Hulu's interface has slowly, but surely become more intuitive as it imitates some of Netflix's interface by providing users with tailored recommendations based on viewing history. This satisfies the learnability aspect of usability. However, Hulu fails to notify users when new content is uploaded, or when content is expiring, this fails to satisfy the learnability aspect. From an efficiency and memorability standpoint, Hulu does not always save exact progress on episodes and movies. This requires users to have to search and sift through the Hulu collection to

find their favorite shows and movies. This fails to satisfy the efficiency and memorability aspects of usability. Another flaw is that Hulu is not entirely consistent across all devices. For example, Hulu on a TV or monitor displays multiple options for users to select from. In contrast, Hulu on a mobile device only displays one tile at a time, creating a longer process for users to make selections and hindering the efficiency of the interface. Hulu is also notorious for the amount of advertisements in the basic subscription package and does not allow users to skip ads. This disregard for efficiency can become a nuisance for some users. Overall, Hulu's interface is organized and has a bright color scheme, but certain usability flaws can hinder the overall user experience.

Amazon Prime Video contains a lot of content but fails to sort the content in a manageable way for users to sort through quickly, this fails to satisfy the learnability and efficiency aspects of usability. Amazon Prime Video is known to have lost customers because of its confusing and somewhat over complex interface. Another learnability and efficiency failure of Amazon Prime Video is that it heavily uses JavaScript. When users have JavaScript blocked, Amazon Prime Video fails to display movie titles properly and does not give proper feedback on how to address this issue. This led users to believe the website is simply flawed in design and implementation (UX Planet – Verma, 2019). Amazon Prime Video does not always save viewed content in the 'My Stuff' category, this fails to satisfy the memorability aspect and leaves users frustrated. Overall inconsistency and unreliability in certain interface features have taken a toll on the overall user experience but does not seem to stop Amazon Prime Video from remaining a top streaming service. Again, content seems to override usability in some cases.

Although HBO provides two different types of streaming, the interfaces are the exact same, except for the onboarding process. The interfaces require different types of log in credentials but after that, HBO GO and HBO NOW are identical platforms. One unique thing HBO does that the other streaming services do not do is that before prompting the user to sign in, it entices them with HBO content. When a user engages with the desired title, it will then prompt the user to log in or subscribe. The HBO mobile app shows a 'continue watching' banner at the bottom of the screen, which only displays the most previously watched title. Unfortunately, this is HBO's main form of memorability. The interface will remember the user's progress in a movie or show but will not always provide a 'continue watching' option. Users must search their favorite show or movie on the HBO interface in order to quickly find their desired content.

While this is slightly slower than having a reliable ‘continue watching’ section, HBO’s search engine provides accurate results that are readily available to the user. HBO’s precise and simple search engine helps boost efficiency. Another point is that while Netflix, Hulu and Amazon Prime Video all have content for children, HBO is strictly tailored for a mature audience. This eliminates the need for PG filters and allows HBO to categorize content based on genre and featured releases. Due to the fact that HBO generally releases new content weekly, HBO notifies users when new content is uploaded. This improves learnability and encourages users to log in weekly to watch their favorite shows, as opposed to binge-watching an entire series in a short time period. HBO also provides the option for users to cast streams to different devices using Apple Air-Play or Google Chrome-Cast. Both the HBO GO and HBO NOW interfaces are consistent across all platforms, this increases learnability and in turn makes users more comfortable with the interface, even though it is not as intuitive as the Netflix interface.

Although all of the listed streaming services vary significantly in user experience and interface design & features, they all maintain similar standards of accessibility. To maintain a sense of equality and ensure all people can benefit from the streaming services, all streaming platforms provide closed captioning and audio description. This helps people with auditory and visual processing disabilities enjoy content as well. All streaming platforms also allow users to change the language used, this ensures that people from all over the world can enjoy content in most languages. These accessibility features can be found in the settings menu on all of the platforms, using the universal settings icon, and some can be adjusted during video play in most streaming services. Accessibility is essential, especially for a streaming service that has millions of users all around the world.

Conclusion:

Based on my research and findings, there is sufficient evidence to conclude that the user experience has a significant effect on the success of a streaming service. The more personalized and intuitive the interface is, the more likely users will be satisfied with the service and continue to pay for their subscription. This is evident from the overwhelming success of Netflix, relative to its competitors. All of the streaming services mentioned in this paper are multi-billion dollar corporations, this proves that they all demonstrate fairly high quality usability standards. In 2019, Netflix generated approximately four times as much revenue as the next leading streaming

service, HBO. This is proof that high learnability, efficiency and memorability truly matter when designing and implementing an interface. The easier the interface is to use increases the usability and in return, increases the popularity, functionality and success of the streaming service.

When developing a software, it is very rare that the product is perfect the first time it is released. All of these streaming services have and will continue to update their interfaces and make the necessary changes required to satisfy the strong majority of their user base. Properly responding to both positive and negative feedback from users and stakeholders will yield a better software and in return, will ensure the success and longevity for the company, users, stakeholders and software.

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