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## *Media Libraries and Subscription Video- -on-Demand Services in Germany: Usage Habits and Perceived Differences from the User's Perspective*



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## **ABSTRACT**

The streaming industry has seen rapid growth worldwide in recent years with intense competition among the major international providers. In Germany, streaming services and pay TV providers achieved a turnover of over five billion euros for the first time in 2022. The number of users subscribing to services such as Netflix, Disney+, and RTL+ has also doubled in the last five years and currently stands at 21.2 million people with one or more subscriptions. In the midst of this competition, this study examines the differences in usage habits, preferences, and user perceptions regarding content offer, user experience, brand perception, and pricing between media libraries and subscription video-on-demand (SVOD) providers in Germany. The study draws on STP theory (segmentation, targeting, positioning) to show how German TV companies can effectively use their resources and differentiate themselves in the competitive market. Based on 1,726 responses from an online survey of German students, empirical significance tests were conducted. These show that SVOD and media library users prefer different program types and that media libraries have a clear need to catch up, especially with regard to personalized recommendations and brand perception.

**KEYWORDS:** Streaming, media libraries, usage habits, genre preferences, brand perception, differentiation.

## INTRODUCTION

Streaming is a growing business globally with intense competition, especially between the major international providers. In the fourth quarter of 2022, 230.75 million people subscribed to Netflix (Netflix, 2022a), while Disney+ had 164.2 million subscribers (Disney, 2023). The streaming market in Germany is also growing. In 2022, streaming services and pay TV providers together achieved a turnover of over five billion euros for the first time (Weis, 2022). The number of users of services such as Netflix, Disney+, Amazon Prime Video, Joyn, and RTL+ has doubled in Germany in the last five years and now stands at 21.2 million, with just under two thirds of users with two or more subscriptions (Klöß & Lange, 2022; Sagatz, 2022). German providers compete with international providers to attract and retain users (Berghofer, 2021). RTL+, for example, has 3.2 million paying subscribers so far (Sagatz, 2022), and the ARD media library recorded a total of 140.50 million visits in December 2022 (ARD, 2023a).

Palomba (2021) describes the specificity of streaming services as follows: “SVOD [subscription video-on-demand] services are uniquely different from traditional television and movie consumption across genres and platforms. SVOD services are predicated on consumers’ abilities to customize their own media consumption experiences across genre and platform.” (Palomba, 2021, p. 363). In this article, with regard to the offerings in the German market, the forms of free video-on-demand (VOD), i.e., content that can be accessed freely and free of charge, ad-based video-on-demand (AVOD, free access financed by advertising), and subscription video-on-demand (SVOD, subscriptions with a basic monthly fee) play a role in particular (Martens & Herfert, 2013).<sup>1</sup> The offerings of the German TV broadcasters are usually summarized in linguistic usage under the term “Mediatheken” (Klosa, 2016), which translates as media libraries. While the public broadcasters operate a free VOD platform (financed by public service fees), the private TV broadcasters offer AVOD and SVOD content (Wagner et al., 2019).<sup>2</sup> SVOD services such as Netflix and Amazon Prime Video have a program offering especially compiled for on-demand use from licensed content and in-house productions, for which users take out a monthly paid subscription (Kunz et al., 2022a). In the German market, there is consequently a competitive landscape between these three different types of streaming providers that operate under different strategic

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<sup>1</sup> YouTube as a platform for professional media content and user-generated content is not considered here.

<sup>2</sup> RTL+ is defined as an entertainment platform (RTL, 2021) and Joyn as a streaming app (Joyn, 2023); in the survey, however, they were listed as media libraries of the TV channels for better understanding by the survey participants.

conditions (Doyle, 2016).

Media libraries have become a globally widespread phenomenon (i.e., Finland, Sweden, UK, US, Japan) and thus an important part of the streaming video competition landscape, directly competing with SVOD services like Netflix or Amazon Prime Video. The German media market is to date one of the largest SVOD markets in the world (Rahe et al., 2021). The strong competition between private and public broadcasters in the German media system has an impact on the streaming market, as both groups invest substantially in their media library offerings (ARD, 2023b; Meier, 2023). For this reason, the competition between these media libraries and the international SVOD providers is an interesting subject of research and due to the widespread distribution of media libraries, insights into usage habits and preferences regarding media libraries compared to SVOD services can also be valuable for other (European) markets with comparable media systems.

In view of the intensified competition and the increasing program investments in the streaming market (die medienanstalten, 2022a), the question arises as to how TV companies can effectively use their existing resources. In contrast to international providers, non-linear distribution of their content is not the only and often not (yet) the prioritized distribution channel for TV broadcasters. They face the challenge of positioning themselves competitively in comparison to Netflix and Disney+ despite limited financial resources (Telkmann, 2021a, 2021b). An investigation by Kunz et al. (2022a) shows that SVOD services and media libraries of German TV channels are at least partly seen as substitutes, but their offerings are nevertheless perceived in a quite differentiated way. According to Kunz et al. (2022a), a (niche) differentiation strategy is necessary and realistic in view of the large budget differences between national media libraries and international SVOD platforms. Examining the user perspective can reveal possible differentiation approaches (Schauerte et al., 2021).

TV broadcasters are especially struggling to reach the young (and particularly advertising-relevant) target group with their linear offerings (e.g., Donders, 2019; Telkmann, 2021a). Furthermore, the use of video streaming and media libraries is particularly strong in the younger age groups (14–34 years; BVDW, 2019) and they have a high potential for using modern media technologies such as streaming (Mikos, 2016). The young target group is therefore of particular interest in the streaming context and will be the focus of this research. The study aims to identify differences in usage habits, preferences, and user perceptions of media libraries and SVOD services. The following research questions will therefore be investigated:

1. What are the biggest differences between media libraries and SVOD services in terms of usage among young users?
2. To what extent are the content offering, the brand, and the price of media libraries and SVOD services rated differently by young users?

In the second chapter of this study, the theoretical background is considered and hypotheses are derived to answer these research questions. The methodology is then explained and the results are presented and discussed. The discussion takes into account the resources and strategies of private and public TV broadcasters from previous studies which included expert interviews. The findings from the comparison of media libraries and SVOD services also provide indications of possible differentiation strategies for media library providers.

### **BACKGROUND AND HYPOTHESIS DEVELOPMENT**

According to Schauerte et al. (2021), “TV companies need to work constantly on the favorability and uniqueness of their brand image” in order to hold their own in the face of intense competition (Schauerte et al., 2021, p. 273). User surveys can help to understand users’ opinions on TV channels and their media libraries and provide indications for competitive positioning (Schauerte et al., 2021). Following the STP theory (segmentation, targeting, positioning), according to Kotler (1994) companies cannot serve the entire market and satisfy everyone. Therefore, they should focus on one or a few market segments (segmentation). These segments should be targeted (targeting) and the company should position itself accordingly in the competition, depending on the resources available (positioning) (Restrepo, 2003). As Kotler (1994) states, the only promising strategy in a segmented market is differentiation.

One difference between VOD and linear TV is that VOD enables mobile consumption, regardless of time and place (Orgad, 2009). The continued development of 4G (or now even 5G) allows users to consume content across a wide range of devices and screens anywhere (Sørensen, 2018). The increasing diversity of usage situations (Any Time, Any Where, Any Device (ATAWAD); EGTA, 2014) has so far only been sporadically taken into account by German TV broadcasters with regard to their VOD offerings (Telkmann, 2021a). One way of using streaming services that has emerged in recent years is binge-watching (Menon, 2022). Researchers have looked at the impact of binge-watching on the user experience in recent years (e.g., Czichon, 2019; Flayelle et al., 2020; Granow et al., 2018), as well as the definition of binge-watching – as watching more than two episodes of a series in a row (e.g., Erickson et al., 2019; Viens & Farrar, 2021). However, comparative media research has only looked at this

phenomenon to a limited extent. As binge-watching has emerged primarily due to the changing offering of expanding streaming services such as Netflix and Amazon Prime Video (Flayelle et al., 2020), it is reasonable to assume that SVOD users are more likely to binge-watch. This leads to the following hypotheses:

H1: SVOD users use streaming content significantly more via mobile devices (tablet, smartphone) than media library users.

H2: SVOD users tend to binge-watch significantly more than media library users.

A significant factor or core product in the media industry is content (Chan-Olmsted & Wang, 2019). According to Noh (2021), genres are a relevant categorization and basis for portfolio decisions of streaming providers, as well as for other cultural products (Lena & Peterson, 2008). According to Mikos (1994) genres are narrative conventions in terms of pattern, structure, form, and content, which correspond with audience expectations. However, Hickethier (2012) defines genres exclusively in terms of content, for example, comedies or thrillers. In this context, the term “media formats” is therefore used in this article to describe the classification forms of video content such as films, series, and documentaries, based on Paus-Hasebrink and Prochazka (2016): Thus they offer a framework of expectations and orientation for the audience regarding technical, content-related and formal aspects, which encompasses more than individual programs (Paus-Hasebrink & Prochazka, 2016). The choice of medium for the use of video content depends on various needs of the users, according to Cha (2013a). Since these needs are also related to preferred media formats, e.g., films, series, or documentaries (Cha, 2013a; Guo & Chan-Olmsted, 2015), it will be investigated whether there are different preferences in this respect in media libraries and SVOD services. Knowledge about the preference structures of users in the media market is an essential prerequisite for the conception of differentiation approaches (Nitschke, 2005). The main drivers of media consumption are the needs for information and entertainment (Schweiger, 2007). Public TV stations in particular are known for high-quality and factual information content (Rühle, 2016). Based on this, the following hypotheses arise in relation to the respective available offering:

H3: The preference of SVOD users for entertainment formats is significantly higher than the preference of media library users.

H4: The preference of media library users for (journalistic) information formats is significantly higher than that of SVOD users.

Kunz et al. (2022a) confirmed the importance of the quality of the content for the relative advantageousness in their study on the intention to use VOD services and the perceived substitutability of SVOD services and media libraries. The quality of the content was characterized by the scope of the offering, the relevance for and the interest of the users in this content. A user survey from 2019 showed that the German providers could not keep up with the benchmark Netflix in terms of the scope and attractiveness of the content – here in particular also due to the enormously high investments of the global providers (Meier, 2023), their distribution expertise, the trust of the users, and the potential monetization (Hennig-Thurau et al., 2019). Global providers are also investing heavily in European exclusive content to offer users local productions (Pauker, 2021). Media libraries, however, might have an advantage in terms of the perceived relevance of their content, as public service providers are considered to have high societal relevance (Eins, 2022). The following hypotheses result from this:

- H5a: The (subjectively perceived) quality of the content of SVOD services is rated significantly better than the content quality of media libraries.
- H5b: The selection of (exclusive) content is rated significantly better for SVOD services than for media libraries.
- H5c: The relevance of the content of media libraries is rated significantly better in comparison to SVOD services.

In the Unified Theory of Acceptance and Use of Technology (UTAUT), Venkatesh et al. (2003, 2012) defined users' effort expectation in relation to interaction with information technology as a key construct. Streaming services stand out from linear television due to their algorithmic recommendation systems, as they suggest content in a personalized way (Budzinski et al., 2022). It can be assumed that international providers such as Netflix have an advantage over media libraries due to their head start in terms of time, extensive usage documentation, and considerable financial investment in their recommendation systems (Hennig-Thurau & Houston, 2019). The same applies to usability, as Netflix's user interface is considered a benchmark in international comparison (TeraVolt, 2020). This results in the following hypothesis:

- H6: The user experience of SVOD services is rated significantly better in terms of personalization and usability than that of media libraries.

From the point of view of the TV broadcasters, who have both a free VOD offering (financed by advertising or public service fees) and in part also a paid SVOD offering, the added value of the paid offering is particularly important. Strategies of TV broadcasters include, for example, limiting the availability of free content or producing exclusive content (originals; primary non-linear productions) for their SVOD offering (Telkmann, 2021b). The portfolio of (price-differentiated) offers of German TV channels and the intense competition with international SVOD providers for viewers and licensing rights (Hiller, 2017; Johnson, 2017) raises the question of whether the price-performance ratio of SVOD providers and media libraries is valued differently. Since the services in media libraries are (in part) not monetarily compensated, but rather through the watching of advertisements or the license fee, the term effort-benefit ratio is used in the following. The perception of the brand by the users also plays an important role in the context of a differentiation strategy (Ehrlich, 2023). Therefore, the following hypotheses are formulated:

H7: Users rate the effort-benefit ratio of SVOD providers significantly better than that of media libraries.

H8: The brands of SVOD providers are perceived as leaders in their sector significantly more often than the brands of media libraries.

## **METHODS**

### **OPERATIONALIZATION**

Established items and scales from the literature were used for the study. A complete list of items for all constructs can be found in Table A1 in the appendix. To measure the success of streaming, in line with Wu and Du (2012), actual usage was examined. Adapted from a scale established by Venkatesh et al. (2012), the frequency of use of media libraries and SVOD services was asked for this purpose in different categories, namely no use at all (never), monthly, weekly, and daily use (Rogers, 2001). Similarly, this scale was used to determine how often streaming was used on different devices such as TV, PC/laptop, smartphone, tablet, or other devices. In line with Leiner and Neuendorf (2022) as well as Shin and Park (2021) the spatial flexibility and the convenience resulting from the ability to use streaming services via different (mobile) devices is an important differentiation from linear television and is therefore included in this study.

As Noh (2021) emphasizes, genres (i.e., formats), as an important tool in the product portfolio of providers (Kennedy, 2002), play a special role in the portfolio development of TV companies. This applies in particular to the expansion into



the streaming sector. As knowledge of content preferences is a particularly important prerequisite for successful differentiation strategies (Nitschke, 2005), especially in the competitive streaming market, this is also included in the survey. The format preferences were asked in accordance with Schmidt and Klug (2017): For this purpose, the preference for the various formats films, series, documentaries, news programs, sports formats, information programs, reality formats, children's programs, live shows, and daily soaps were to be rated on a 7-point rating scale ("I don't like it at all" to "I like it very much"; Rentfrow et al., 2011). As preferred media formats are directly related with the user's motives to watch streaming content, based on the uses and gratifications approach some motives related to information and entertainment were included, too (Bondad-Brown et al., 2012; Song et al., 2021).

A particular user behavior that has emerged because of streaming services is binge watching (Steiner & Xu, 2020). As the use of streaming services and linear television is particularly different in this respect (Castro et al., 2021), this form of consumption was also covered. The users' tendency to binge-watch was surveyed with three items according to Song et al. (2021). Another possible difference is the timing of content consumption due to the time sovereignty of streaming and the still strong connection of media library content to the linear program (Telkmann, 2021a). Whether and to what extent the time of release of the content is relevant for users is therefore also investigated.

While the comparison between established and new media, e.g., print and online media or linear television and streaming, is well established in research (e.g., Flavián & Gurrea, 2009; Jang & Park, 2016), there has been rather limited research on the comparison of two different innovative media (Chan-Olmsted et al., 2020), as in this case media libraries and SVOD services. Therefore, both the perceived relative advantage (Cha, 2013b) and the perceived substitutability (Flavián & Gurrea, 2007) between SVOD services and media libraries are surveyed. To measure the perceived relative advantage and substitutability, one item each is used ("Video streaming providers satisfy my need for video content better than media libraries."; "Video streaming providers and media libraries satisfy different needs."; Kunz et al., 2022a).

Following the multi-dimensionality of content and system quality of streaming services developed by Zabel et al. (under review), single items based on established, semantically similar operationalization of the constructs were used (Fuchs & Adamantios, 2009). The evaluation of the content offered by the media libraries and SVOD services was assessed with the following items: subjectively perceived quality of the content offered in the media libraries or SVOD services ("I think that ... offers good content."; Jung et al., 2009), relevance of the content ("...provides up-to-date content."; Jung et al., 2009), content selection ("... has a good selection of content."; Kunz et al., 2022b), exclusivity of content ("... offers a wide range of exclusive content."; Shin, 2009), and personalization of recommended content ("I

think the recommended content of ... is personalized.”; Kim & Han, 2014; Xu et al., 2008). In addition to the evaluation of the content, items were included addressing the usability (“Using ... is clear and understandable.”; Venkatesh et al., 2012), the effort-benefit ratio (“... provides a good value for the money.”; Kunz & Santomier, 2019; Venkatesh et al., 2012), and brand perception (“The brand ... is a leader in its sector.”; Bilgin, 2018). These items were each rated on a 7-point Likert scale ranging from “strongly disagree” to “strongly agree”. There was also the option to choose “no answer” to avoid forced answers.

## DATA COLLECTION AND SAMPLE

The data collection was conducted through an online survey using the Enterprise Feedback Suite (EFS) survey from Tivian XI GmbH, in which students (and employees) of Cologne University of Applied Sciences were surveyed over a period of two weeks in January and February 2023. The average response time was around 19 minutes, and a total of 2,255 people took part in the survey. After cleaning and quality control of the data set, the data of  $N = 1,726$  respondents could be used for the evaluation.

The average age of the respondents is 26 years. The sample is divided into 53.0 percent men, 44.7 percent women, 1.4 percent who identify as diverse, and 0.9 percent who did not specify their gender. The majority of respondents have a university entrance qualification (61.0%), while 30.0 percent already have a university degree. Of the participants, 84.1 percent are students, and another 12.0 percent are employees. Peterson (2001) questions the use of student samples because of their possible differing characteristics from non-student populations. However, in line with Torres et al. (2014) as well as Espinosa and Ortinau (2016) it can be assumed that a student sample is particularly suitable for an initial investigation of the research subject: the use of video streaming and media libraries is particularly strong in the younger age groups (14–34 years) (BVDW, 2019) and they have a high potential for using modern media technologies such as streaming (Mikos, 2016). Students are also an important part of the younger (advertising-relevant) target group, which is being reached less and less with linear television and which TV broadcasters want to address especially via their streaming offerings (Telkmann, 2021a). Despite the suitability of the sample established here, the limitations of a student-based sample must be taken into account when generalizing the results (Winton & Sabol, 2022).

Since the study consists of two different sub-surveys with a focus on different content matters, 60 percent of the participants were directed to one survey part and 40 percent to the other survey part.<sup>3</sup> The first part of the survey comprised

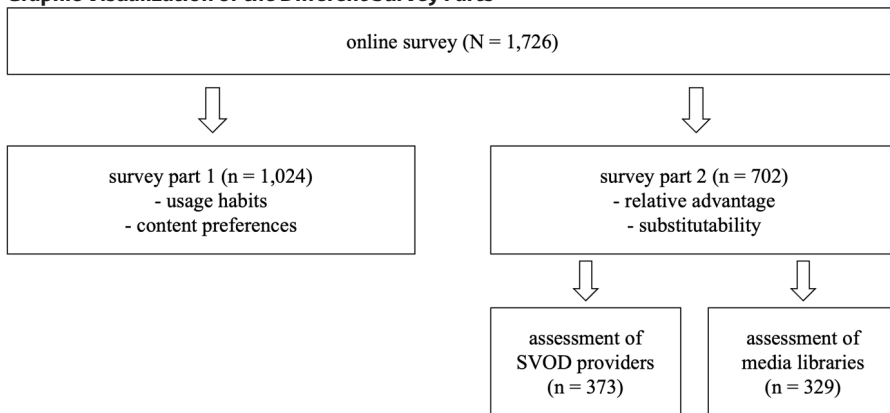
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<sup>3</sup> This structure of the survey leads to different sub-samples for the different hypotheses.

$n = 1,024$  completed questionnaires and surveyed the respondents about their usage habits and content preferences. A total of  $n = 702$  completed questionnaires could be used for the comparative evaluation of SVOD providers and media libraries (survey part 2; cf. Figure 2).

**Figure 1**

**Graphic Visualization of the Different Survey Parts**



Source: Own representation.

In the process of survey part 2,  $n = 373$  people were randomly asked about their use of SVOD services and  $n = 329$  about their use of media libraries.<sup>4</sup> They were questioned about either the media library or the SVOD service they were most familiar with.<sup>5</sup> The most familiar SVOD services among the respondents are Netflix (76.9%), Amazon Prime Video (11.3%), and Disney+ (5.4%). In terms of media libraries, these are the ZDF (35.6%) and the ARD media libraries (34.8%), as well as RTL+ (11.7%) and Joyn (8.8%). In order to examine the perceived differences between media libraries and SVOD services in more detail, the mean values of the single-item measures were compared with regard to the content offered, the effort-benefit ratio, usability, personalization, and brand, as well as subsequently tested for significant differences.

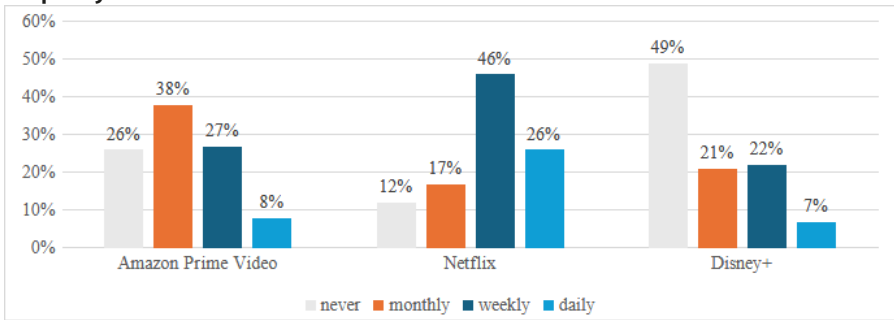
According to a survey conducted by the state consumer advice centers in 2017, no gender-specific distinction is evident in the use of streaming services

<sup>4</sup> Due to the pairwise case exclusion, the case numbers may differ somewhat for the different variables.

<sup>5</sup> For example, if a respondent indicated RTL+ as their most trusted media library and Netflix as their most trusted SVOD service and was then randomly assigned to the SVOD services part of the survey, Netflix was inserted into the items (e.g., "Netflix has a good selection of content.").

(Schmidt & Zaborowski, 2017). The gender distribution in the sample is therefore approximately representative with about 45 percent women and 53 percent men. In addition, the frequency of use of SVOD services and media libraries is considered in comparison to the ARD/ZDF online study from 2022. According to the ARD/ZDF online study, Netflix is used at least monthly by 84 percent of 14–29-year-olds (88% in this survey, cf. Figure 2), Amazon Prime Video by 70 percent (74% in this survey), and Disney+ by 44 percent (51% in this survey) (Rhody, 2022).

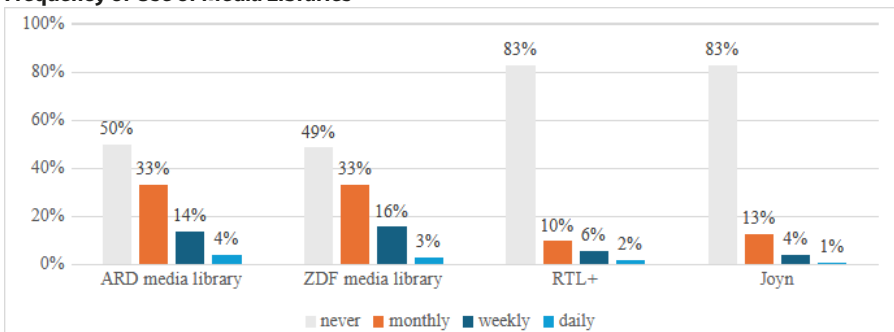
**Figure 2**  
**Frequency of Use of SVOD Services**



Source: Own representation based on the online survey (n=1,702).

The use of SVOD services in this sample thus corresponds closely to that of 14–29-year-olds and thus to those who use VOD most frequently and intensively (die medienanstalten, 2022b). The data on the use of German offerings also indicates that this sample, which consists predominantly of students, has a good informative value.

**Figure 3**  
**Frequency of Use of Media Libraries**



Source: Own representation based on the online survey (n=1,710).

The data from the ARD/ZDF online study on the use of media libraries from 2022 shows that 52 percent of the German-speaking population aged 14 years and older use the media libraries of ARD and ZDF (at least rarely). This is almost completely consistent with the statistics from this survey, in which 50 percent of the respondents use the ARD media library and 51 percent the ZDF media library at least monthly (cf. Figure 3). The percentage shares also only differ slightly for the offerings of the private TV broadcasters, namely RTL+ and Joyn. According to the online study, 17 percent (18% in this survey) of the German-speaking population aged 14 and older use RTL+ (at least rarely) and 16 percent Joyn (18% in this survey). The media libraries of the public broadcasters ARD and ZDF are used significantly more, which is also reflected both in the ARD/ZDF online study and in the data available here (ARD/ZDF Forschungskommission, 2022). Accordingly, a good representativeness can be assumed, which is not (totally) limited to the age range 14–29 years.

#### **DATA ANALYSIS**

For a more detailed analysis of usage habits and preferences, a distinction was made between the two groups of media library and SVOD users on the basis of the data from the first part of the survey: On the one hand, survey participants who predominantly watch content in the TV broadcasters' media libraries ( $n = 48$ ), and on the other hand, people who predominantly use content via SVOD services ( $n = 738$ ). With regard to the explanatory power, however, it must be taken into account that the number of media library users is only  $n = 48$ , while the group of SVOD users comprises  $n = 738$  people. Nevertheless, these groups offer first clues regarding preferences and usage habits. In addition to the descriptive comparison of the mean values between both groups, significance tests were carried out. For the ordinal scaled construct "devices for streaming use", the non-parametric Kruskal-Wallis test was used (Cleff, 2019), while the T-test for independent samples was applied for the interval-scaled constructs. The prerequisites for carrying out the T-test were checked in advance. The variables under consideration must be at least interval-scaled and there should be a normal distribution of the variables in both groups. There should also be variance homogeneity, and ideally the groups should be of equal size. To investigate the difference hypotheses in relation to the preferred formats as well as the ratings of media libraries and SVOD services, endpoint-named 7-point scales were used in each case, which may be interpreted as interval-scaled (Porst, 2014). The Shapiro-Wilk test indicates that the variables are not normally distributed (Bortz & Schuster, 2010). Since the groups are each larger than

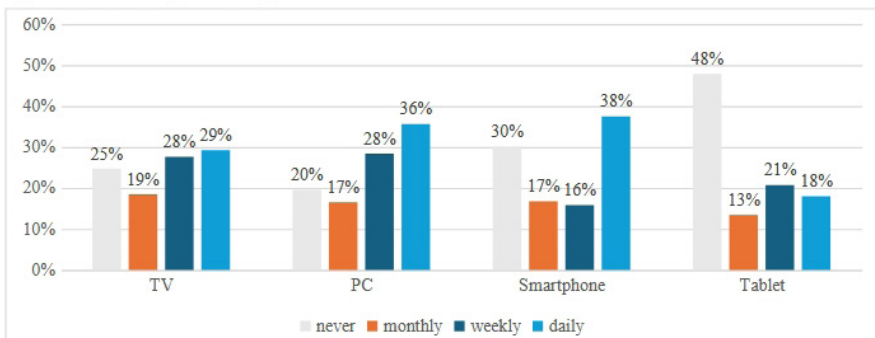
$n = 30$ , nevertheless, a normal distribution may be assumed based on the Central Limit Theorem (Backhaus et al., 2016). The Levene test was used to test for variance homogeneity (Backhaus et al., 2016). There is variance homogeneity for the preferred media formats. Since there is variance heterogeneity for individual variables in the ratings of media libraries and SVOD services (in the data from the second part of the survey) and normal distribution is only assumed, the Mann-Whitney U test was carried out to validate the results. Ideally, the groups to be examined would be approximately the same size, but the T-test reacts robustly to premise violations (Bortz & Schuster, 2010), which means that this test can also be used to examine the preferred media formats, although the group of media library users is notably smaller than that of the SVOD users. Finally, the strength of the effect was evaluated using Cohen's  $d$  effect size. Cohen (1988) defined values of  $d < 0.2$  as small effects, values of  $d < 0.5$  as medium effects, and values of  $d \geq 0.8$  as large effects.

## RESULTS

### USAGE HABITS

If the use of the different devices TV, PC, smartphone, and tablet for streaming content is considered as a whole, the PC is used by most respondents with 80.5 percent, followed by the TV with 75.3 percent, the smartphone with 69.9 percent, and the tablet with 52.1 percent. In particular, the smartphone (38%) or the PC (36%) are used daily for streaming (cf. Figure 4).

**Figure 4**  
**Devices Used for Streaming**



Source: Own representation based on the online survey (n=786).

The Kruskal-Wallis test shows a significant difference in the use of PCs and smartphones for streaming between media library and SVOD users (PC:  $p = 0.002 \leq 0.05$ ; smartphone:  $p = 0.046 \leq 0.05$ ). Among media library users, 37.5 percent never use their PC for streaming (SVOD: only 18.3% never use their PC), while 36.4 percent of SVOD users actually stream with their PC every day (media library: 22.9% use their PC to stream every day). Regarding the use of the smartphone for streaming, 41.7 percent of media library users never use it (SVOD: 29.3% do not use a smartphone for streaming), while 38.1 percent of SVOD users use a smartphone for streaming daily. There are no significant differences in terms of TV and tablet use. Hypothesis H1, that SVOD users put mobile devices to use for streaming more often than media library users, is confirmed with regard to streaming via smartphone and PC.

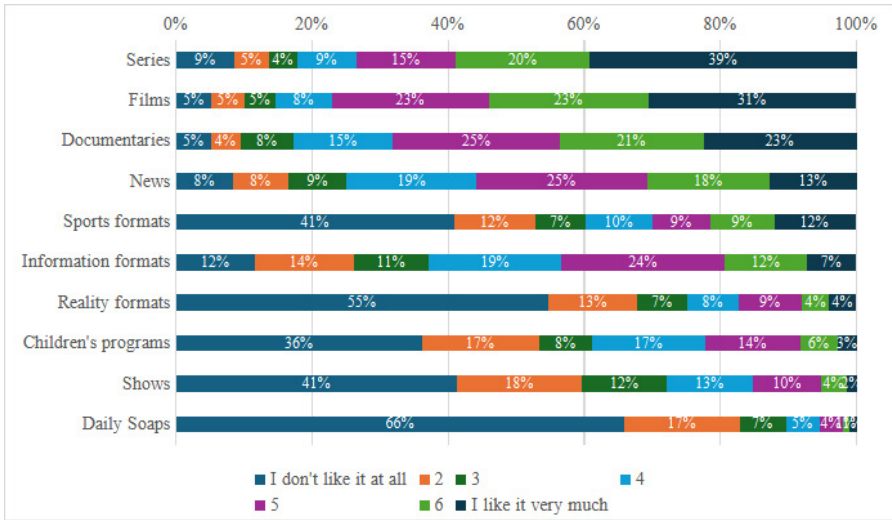
With mean values between 5.56 and 5.93 (on a scale of 7), respondents tend to watch several episodes of a series in a row. With regard to binge-watching, the mean values of the media library and SVOD users are also compared. Both the T-test and the Mann-Whitney U test indicate a significant difference in the mean values of the binge-watching behavior of the media library and SVOD users. SVOD users are significantly more inclined to watch multiple episodes of a series in one sitting (6.00 vs. 4.92), promptly (5.97 vs. 5.00), and consecutively (5.65 vs. 4.21). Thus, hypothesis H2 is confirmed.

Media library users also watch content significantly more often at fixed times/shortly after its release than SVOD users (Chi<sup>2</sup> test; Berekoven et al., 2009). Nevertheless, a total of 75 percent of respondents do not align their usage with content release dates, and instead consume it at whatever time suits them. About eight percent watch at a fixed time when the content is posted online or on the same day, and just under 17 percent watch during the week after the content is posted.

## **PREFERRED MEDIA FORMATS**

This section looks at the preferred media formats and the usage motives directly related to them. Series are the most popular, with 39 percent of respondents liking series very much, followed by movies with 31 percent. Reality formats, children's programs, live shows, and daily soaps, on the other hand, are of rather little interest (cf. Figure 5).

**Figure 5**  
**Media Formats**



Source: Own representation based on the online survey (n=786).

An examination of the mean values (on a scale of 7) shows that SVOD users have a stronger preference for movies and series. Media library users, on the other hand, have a much stronger preference for news, i.e., daily news programs and information programs. With regard to documentaries, the two groups differ only marginally. The other media formats surveyed, such as daily soaps, live shows, reality formats, sports, and children’s programs, arouse little interest in either group (cf. Table 1).

**Table 1**  
**Preferences for Media Formats**

Preferences for...	SVOD users (n=738)		Media library users (n=48)		differences
	mean	SD	mean	SD	
Series	5.52	1.85	4.78	1.92	0.74
Films	5.41	1.64	4.66	1.86	0.75
Documentaries	4.95	1.65	5.02	1.87	-0.07
News	4.34	1.73	5.07	1.82	-0.73
Information programs	3.81	1.73	4.57	1.92	-0.76
Sports programs	2.97	2.21	3.57	2.26	-0.60



Preferences for...	SVOD users (n=738)		Media library users (n=48)		differences
	mean	SD	mean	SD	
Children's programs	2.72	1.78	3.36	1.94	-0.64
Live shows	2.39	1.58	2.85	1.87	-0.46
Reality formats	2.18	1.69	2.11	1.87	0.07
Daily soaps	1.63	1.16	1.98	1.69	-0.35

Source: Own representation based on the online survey.

The T-test shows that the preferences for series, movies, news, and information programs differ significantly ( $p \leq 0.05$ ) between media library and SVOD users. With values of  $d > 0.8$ , these effects can be assessed as large according to Cohen (1988). Thus, hypotheses H3 and H4 can be confirmed with regard to these four media formats, i.e., series and movies as entertainment formats and information and news formats as journalistic formats. There are no significant differences between the two groups regarding the other media formats.

The preferred media formats are directly related to the motives for using streaming content. In the survey, the motives of fun, entertainment, and tuning out from everyday life emerged as particularly relevant. The mean values of the motives are generally lower among media library users than among SVOD users, with the exception of the two cognitive motives, namely the interest in learning about what is happening in the world and the need to learn new things that one has never done before.

### **MEDIA LIBRARIES VS. SVOD SERVICES**

Since the media libraries and SVOD services compete for the attention of users, the relative advantageousness and the perceived substitutability of media libraries and SVOD services were examined from the user's point of view (survey part 2). For the statement on relative advantageousness, namely that SVOD providers such as Netflix, Disney+ or Amazon Prime Video satisfy the users' need for video content better than media libraries from ARD, ZDF, or RTL+, the mean value is 5.29 (SD 1.64) on a 7-point scale. SVOD services are therefore perceived as more advantageous overall. However, 12.7 percent of users say that media libraries meet their needs better, and another 17.7 percent neither agreed nor disagreed. Regarding the satisfaction of different needs by SVOD providers compared to media libraries, the mean score is 5.48 (SD 1.48). Thus, media libraries and SVOD services are (rather) not perceived as substitutable. Only 8.9 percent of users believe that media libraries and SVOD providers do not satisfy different needs and can therefore act as substitutes.

In terms of provider-related evaluations, SVOD services are rated better than media libraries in all areas, apart from the relevance of the content and the effort-benefit ratio. The biggest differences are in the rating of the brand (as a leader in its sector) and the perceived personalization of the recommended content. SVOD services also score significantly better in terms of usability and the selection of exclusive content. However, the differences in the assessment of the range of good content on offer are less clear (cf. Table 2).

**Table 2**  
**Evaluations of SVOD Services vs. Media Libraries**

	SVOD (n=373)		Media library (n=329)		difference
	mean	SD	mean	SD	
I think ... provides good content.	5.39	1.37	5.13	1.54	0.26
... offers relevant content.	4.98	1.43	5.12	1.50	-0.14
... offers up-to-date-content.	5.38	1.41	4.89	1.59	0.49
... has a good selection of content.	5.35	1.40	4.69	1.54	0.66
... offers a wide range of exclusive content.	5.37	1.41	4.54	1.57	0.83
I think the recommended content of ... is personalized.	5.28	1.33	3.77	1.62	1.51
Using ... is clear and understandable.	6.18	1.16	5.32	1.54	0.86
... provides a good value for the money.	4.30	1.64	4.69	2.16	-0.39
The brand ... is a leader in its sector.	5.37	1.55	3.66	1.68	1.71

Source: Own representation based on the online survey;

“...” is replaced in the survey by the service that the respective respondent knows best.

The T-test for independent samples – as well as the additionally conducted Mann-Whitney U test – confirms the significant differences in the evaluation of media libraries and SVOD services ( $p \leq 0.05$ ). The hypotheses on the evaluation differences of the quality of the content (H5a) as well as the selection of (exclusive) content (H5b), the user experience (H6), and the brand perception (H8) can therefore be accepted. Hypothesis H7 on the effort-benefit ratio, on the other hand, is not confirmed.

Since Netflix is by far the best-known SVOD service in this sample (76.9%,

n=298), Netflix will additionally be compared below with the largest two German public media libraries (ARD & ZDF: n=246) and the largest two streaming services of the private broadcasters (RTL+ & Joyn: n=69). Due to the major differences in the strategic conditions under which these types of providers operate, it is important to differentiate between them. In contrast to the overall comparison, there is no significant difference between Netflix and the media libraries of ARD and ZDF in the assessment of the quality of the content (“I think that ... offers good content”). Netflix has a mean of 5.36 here and is thus only marginally above the rating of the public media libraries with 5.25 (cf. Table 3). However, the other differences already mentioned also show significance in this comparison in the T-test for independent samples and the Mann-Whitney U test respectively. While the relevance of the content between media libraries and SVOD providers was not significantly different, the difference between Netflix and the public service media libraries, on the other hand, is significant. The mean value of the ARD and ZDF media libraries of 5.38 is significantly higher than the value of Netflix of 4.95. Hypothesis H5c can therefore be accepted with regard to public service media libraries.

**Table 3**

**Evaluation of Netflix vs. ARD/ZDF vs. RTL+/Joyn**

	mean Netflix (n=298)	mean ARD/ ZDF (n=246)	mean RTL+/ Joyn (n=69)
I think ... provides good content.	5.36	5.25	4.79
... offers relevant content.	4.95	5.38	4.25
... offers up-to-date-content.	5.42	4.82	5.23
... has a good selection of content.	5.37	4.70	4.71
... offers a wide range of exclusive content.	5.38	4.51	4.74
I think the recommended content of ... is personalized.	5.33	3.53	4.57
Using ... is clear and understandable.	6.30	5.28	5.44
... provides a good value for the money.	4.32	4.89	4.00
The brand ... is a leader in its sector.	5.58	3.75	3.43

Source: Own representation based on the online survey;

“...” is replaced in the survey by the service that the respective respondent knows best.

If Netflix is now compared with the offerings of the private broadcasters, i.e., RTL+ and Joyn, some differences to the comparison with the public media libraries can be seen: With regard to the timeliness of the content and the cost-benefit ratio, the differences between Netflix and RTL+/Joyn are not

significant. However, the quality and relevance of the content, the selection of (exclusive) content, personalization, usability, and brand of Netflix are rated significantly better ( $p \leq 0.05$ ). All significant differences in the T-test listed here show large effects ( $d > 0.8$ ).

In November 2022, Netflix introduced the basic subscription with advertising at a lower price of 4.99 euros per month (compared to the basic subscription for 7.99 euros per month without advertising; Netflix, 2022b). To further assess the effort-benefit ratio, we therefore asked whether Netflix is used with or without advertising. Out of the Netflix subscribers, almost one fifth already have a basic subscription with advertising after the short introductory phase of this model (2-3 months from its introduction to the start of this survey).

## DISCUSSION

The comparison between SVOD services and media libraries provides interesting insights into the differences in usage habits and preferences, as well as the perception of the respective offer.

SVOD services are more popular than media libraries in this (rather young) sample and are used more frequently via mobile devices. Usability plays a particularly important role in use via mobile devices (Elsafty & Boghdady, 2022). However, media library providers tend to lag well behind the competition in terms of usability, as was also found in other studies (e.g., Hennig-Thurau et al., 2019). In recent years, competition has been interpreted primarily as competition at the level of content (e.g., Nielsen, 2023; Wilhelm, 2023). Yet, systemic factors are also important for media libraries to compete with SVOD services, similar to other media technologies such as VR games or mobile TV (Hino, 2015; Kunz et al., 2022b; Shin, 2009). According to a recent study by Gundlach (2023), the usability and the technology driven user experience are rather “must-haves”, which must correspond to the quality of the market standard set by Netflix and Amazon Prime Video. In future studies, usability should be examined in more detail and differentiated according to the devices used to enable more precise recommendations for action. Other system quality factors could also be of importance.

In terms of brand perception, there is a clear need to catch up, both overall and when considering the public and private media libraries separately. This is confirmed by the results of the study by Hennig-Thurau et al. (2019), and the experts in the interviews with the TV stations also regard Netflix as a benchmark. Brand perception here goes hand in hand with the greatest challenge, as stated by the TV broadcasters, namely creating a unique selling point for their own platform and at the same

time differentiating between linear and non-linear offerings (Telkmann, 2021b). Although linear TV use is strongly habitual (Koch, 2010), the use of media libraries is (rather) not habitual. The primarily content-driven motives for using streaming services highlight the importance of promotion to draw attention to new content. TV stations can take advantage of the possibility of cross-promotion between linear TV and their media libraries (Telkmann, 2021a). The broadcasters can use cross-promotion primarily for catch-up offerings, which do not exist in this form among SVOD providers, i.e., purely online players.

When it comes to publishing new content, SVOD providers and media libraries are increasingly (again) relying on a weekly release model. This is justified, for example, by subscriber loyalty and thus the avoidance of churn, the weekly release of series produced by TV broadcasters (e.g., *Game of Thrones* on HBO), but also content-related aspects such as slow- or fast-paced storytelling and buzz, i.e., the discussions, speculations, etc. that take place in person or on social media between two episodes (Schwarzer, 2021). In addition, SVOD providers (so far) focus more on series than media libraries, so that the greater tendency of SVOD users to binge-watch – a form of use that has emerged through streaming services – is presumably also due to the greater offer of such content.

Users see the greatest advantage of SVOD services in the personalized recommendations. These are a major challenge for the German TV broadcasters, as the algorithm-based recommendations are based on user data, which the SVOD services have to a much greater extent than the TV broadcasters – primarily due to the strict data protection guidelines in Germany (Telkmann, 2021b). The public broadcasters, as well as the private broadcasters with their AVOD offerings, do not require a mandatory log-in. This means that only registered users have a detailed usage history the algorithm can access. For users who are not logged in, there are still (only) editorial recommendations, such as new releases or recommendations based on genres or varied by device. Nevertheless, the personalization at RTL+ and Joyn is rated significantly better than that of the public media libraries. As part of the linking of their media libraries (Schaarschmidt, 2021), however, ARD and ZDF have also been working in recent years on an individual recommendation system that, against the backdrop of their public service mission, is not only based on user data, but is also “value-driven” (Tieschky, 2021). The following public value metrics are used for this purpose: diversity (diversity of recommended content), coverage (share of recommended videos in the total content portfolio), popularity (frequency of use compared to other content, novelty (recommendation of rarely used content), and serendipity (enthusiasm of users for

content outside their previous interests; ZDF, 2023). Future studies should further investigate the perception and evaluation of these algorithm-based recommendations adapted to the public service mission.

Moreover, the public service media libraries receive only a slightly better rating in the effort-benefit ratio, even though they are free of charge. Future studies could provide further insights into the extent to which the broadcasting fee is perceived as a “price” as an extension of discussions on the “zero price” (e.g., Budzinski et al., 2021a) and the willingness to pay for public service content (Grammel & Gründel, 2018; Háló et al., 2023). The findings of Gundlach (2023) suggest that the majority of people evaluate the public service fee as a market price. In this study, it should be noted that it is a sample of students. Thus, it is reasonable to assume that on the one hand, students are either exempt from the public service fee or do not pay it themselves. On the other hand, they could also be co-users of paid SVOD subscriptions, which could lead to a different assessment of the effort-benefit ratio in a sample representative of the German population. In the case of the private broadcasters’ offerings, a distinction should also be made in further studies between the AVOD and SVOD parts of the offering. It can be assumed, for example, that the price-performance ratio is assessed differently. The price to be paid for the SVOD offer is (presumably) only related to the added value of the SVOD offer and not to the partly “free” AVOD offer – as was also mentioned in the interviews with the TV stations (Telkmann, 2021a). Similar to the perception of the broadcasting fee as a “price”, the question arises here whether the viewing of advertising is perceived as a “price”. The high share of respondents with the basic Netflix subscription with advertising, despite the short time since its launch, also suggests that the young target group with a (rather) low income in particular is quite willing to accept advertising in exchange for having to pay less for the subscription. RTL+, for example, also takes advantage of this by allowing users to choose between an ad-free model (RTL+ Max for 12.99 euros/month) and a model with some advertising before the actual broadcast (RTL+ Premium for 6.99 euros/month; RTL interactive GmbH, 2023).

### **PRACTICAL IMPLICATIONS**

Finally, potential approaches for differentiation strategies of media libraries are discussed. This study suggests that media libraries and SVOD services are only substitutable to a limited extent in the perception of the users. The high share of people with multiple subscriptions suggests that the individual providers are not seen as directly or completely substitutable. Substitutability thus does not appear to be absolute, and instead can be perceived quite differently depending on genres and/or individual needs. This is also

confirmed by the usual competitive use of media services and by the results of current studies, which describe competition between streaming services as complex (e.g., Budzinski et al., 2021b; Lobato & Lotz, 2021).

According to the STP approach, positioning must be determined depending on the available resources (Kotler, 1994). Compared to the large international providers, TV stations have lower budgets, some of which are tied to linear broadcast slots (Telkmann, 2021b), so it seems to make sense to focus on specific content and thus target group segments. While SVOD users prefer series and films to a greater extent, media library users prefer information and news formats. The preferences for media formats in media libraries and SVOD services are presumably also conditioned by the respective offering. Media libraries, for example, offer daily updated content, while this is hardly or not at all available on SVOD platforms. In the case of licensed series and feature films, digital exploitation in media libraries was and is often limited. For this reason, TV broadcasters are increasingly relying on in-house productions, for which all rights are then usually available for online exploitation (Telkmann, 2021a). The usage motives confirm the format preferences, as the two cognitive motives of learning about what is going on in the world and learning new things are more pronounced in media libraries than in SVOD services. These results are consistent with the motives for using streaming services from the ARD/ZDF long-term study on mass communication from 2020 (Breunig et al., 2020).

It would therefore be advisable for media libraries to further strengthen information and news formats to maintain their competitive advantage over international platforms. Since positioning should always be approached in relation to the previously perceived position in order to avoid dissonance (Feddersen, 2010), the provision of daily updated and trustworthy content should be the starting point, especially for public service providers. However, Netflix is also offering more and more documentaries and local content (Iordache et al., 2022). A strategic dilemma arises in terms of a sustainable differentiation (USP), because the SVOD providers are trying to develop as generalists (also) in the direction of the positioning of the (public service) media libraries (Cennamo & Santalo, 2013).

The repeatedly discussed national alliances in the production of new content or the merging of platforms (Böhm et al., 2023; Mosen, 2021) also represent an opportunity to have an impact in international competition. Finally, by combining budgets, large-scale fictional productions are also possible, such as the current series “Der Schwarm”, which was produced in a cooperation between ORF and SRF (Kläver, 2023). In this way, German providers can assume or retain a relevant, albeit not leading, role in the perception of

users regarding fictional content such as series and films (cf. also Gundlach, 2023). For future studies, it would also be interesting to focus on the comparison between public and private providers in more detail.

### **LIMITATIONS AND FUTURE RESEARCH**

When evaluating the results of this survey, some limitations should be taken into account. The student sample is suitable for an initial investigation but may nevertheless show differences to all young streaming users and, of course, to the overall population of streaming users in Germany. Particularly with regard to the media libraries of the public broadcasters, the predominant use of third-party platforms or the streaming offerings of the private TV broadcasters by the young (student) target group considered here (e.g., Eichler, 2023) may lead to a limited representativeness of this study. In particular, the homogeneity of the sample in terms of educational attainment significantly limits the representativeness of the sample and thus the possibility of deriving generalizable confirmations or rejections of the hypotheses. Thus, the results should be re-examined at a later date using a sample representative of the whole German population.

The German media market has some specific features, such as the strong competition between commercial and public broadcasters as well as the extensive public funding combined with the public service mandate to which the latter are committed. This means that the results can be applied to markets with a similar media system, such as Finland (Herzog & Karppinen, 2014), but there are clear differences to markets such as the UK with a much less state-regulated public broadcasting, whose public funding may soon be ending, and a strong pay-TV sector (Michalis, 2018).

The differences between public and private media libraries should also be considered in more detail in subsequent studies. In particular, the different strategic challenges and their effects on the offer and the perception by users play an important role here. While public media libraries have to fulfill their public service mission and contribute to the generation of public value, private media libraries have to generate advertising and subscription revenues to refinance the private TV companies' non-linear activities.

In addition, although the groups of media library and SVOD users were formed so as not to overlap, the two forms of use are not mutually exclusive. The use of different devices for streaming was only assessed on an ordinal scale. In a follow-up study, this could also be operationalized on an interval-scaled scale. Furthermore, since this study was conducted as part of another project, the different parts of the survey refer to two different samples.

The users' preferences for different media formats were surveyed by (direct)



self-assessment. This approach, which was partly due to the length of the questionnaire, has been criticized for not being sufficiently differentiated from the construct “attitude” (Kreller, 2000). Furthermore, there is a correlation between users’ preferences and the available content (Seibold, 2002), so that the respective media formats offered in the media libraries and SVOD services (can) influence preferences. Therefore, it cannot be clearly concluded from the preferences that users prefer to watch series, for example, in SVOD services rather than in media libraries. The larger selection of series in SVOD services could have contributed to this assessment. The preferences should therefore be interpreted taking this premise into account.

The survey also asked respondents to rate value for money, although for non-monetary compensation it would be more appropriate to refer to the effort-benefit ratio. The use of the term “value for money” in the survey may have introduced bias into the responses. In follow-up surveys, it should be clearly defined that subscription fees, advertising, and public broadcasting fees are to be understood as price or effort. In addition, it should be borne in mind that students may not pay the broadcasting fee or monthly subscription fees themselves because, for example, they still live with their parents or share a subscription with others in shared apartments.

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## APPENDIX

**Table A1.**  
**List of Items for all Constructs.**

Actual Usage		
AU_Frequency	Overall, how often do you use media libraries (e.g., ARD or ZDF Mediathek) / SVOD services (e.g., Netflix or Amazon Prime Video)?	never (1) once a month (2) several times a month (3) once a week (4) several times a week (5) daily (6) several times a day (7) no response (8)
SVOD Devices		
SVOD_Device1	Television	never (1) once a month (2) several times a month (3) once a week (4) several times a week (5) daily (6) several times a day (7) no response (8)
SVOD_Device2	PC/Laptop	
SVOD_Device3	Smartphone	
SVOD_Device4	Tablet	
SVOD_Device5	Other devices	
Format Preferences		
Format_Pref1	Series	I don't like it at all (1) – I like it very much (7) no response (8)
Format_Pref2	Films	
Format_Pref3	Documentations	
Format_Pref4	Telenovela/Daily Soaps	
Format_Pref5	News programs	
Format_Pref6	Information programs	
Format_Pref7	Sports formats	
Format_Pref8	Live shows	
Format_Pref9	Docutainment/Reality	
Format_Pref10	Child's programs	
Binge-Watching		
Please state the extent to which you agree with the following statements:		
Tendency_BW1	I tend to watch several videos/episodes of a particular series in one sitting.	strongly disagree (1) – strongly agree (7) no response (8)
Tendency_BW2	I tend to watch several videos/episodes of a particular series as quickly as possible.	
Tendency_BW3	I sometimes watch a certain series very fast.	
Use Rhythm		
How would you describe the rhythm of your series consumption?		

<b>Actual Usage</b>		
Use_Rhythm1	I watch episodes at their scheduled times.	Choose one of the options.
Use_Rhythm2	I watch episodes on the same day when they are released, but with a time delay.	
Use_Rhythm3	I watch episodes during the week/close to the time they are released.	
Use_Rhythm4	I watch episodes when the time suits me.	
Uses & Gratifications (I watch streaming content...)		
UG_Fun	...because it's fun.	strongly disagree (1) – strongly agree (7) no response (8)
UG_Entertain	...because it's enjoyable.	
UG_Relax	...because it relaxes me.	
UG_Escape	...because I can tune out from everyday life.	
UG_Info	...to learn about how to do things I haven't done before.	
UG_Current	...to learn about things happening in the world.	
UG_Bored	...because it passes the time away, particularly when I am bored.	
<b>Netflix Subscription</b>		
Netflix_Subscription	Have you subscribed to Netflix with the ad-supported, lower-priced subscription or the ad-free, more expensive subscription?	Choose one of the options: ad-financed ad-free
<b>Relative Advantage and Substitutability</b>		
Relative_Advantage	Video streaming providers satisfy my need for video content better than media libraries.	strongly disagree (1) – strongly agree (7) no response (8)
Substitutability	Video streaming providers and media libraries satisfy different needs.	
<b>Single item measures for the evaluation of media libraries / SVOD services (I think...)</b>		
Evaluation1	... provides good content.	strongly disagree (1) – strongly agree (7) no response (8)
Evaluation2	...offers relevant content.	
Evaluation3	...offers up-to-date content.	
Evaluation4	... has a good selection of content.	
Evaluation5	... offers a wide range of exclusive content.	
Evaluation6	I think the recommended content of ... is personalized.	
Evaluation7	Using ... is clear and understandable.	
Evaluation8	... provides a good value for the money.	
Evaluation9	The brand ... is a leader in its sector.	