Investigating Motivational Factors Influencing Users' Consumption of Video Streaming Services: A Human Factor Perspective

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Abstract. This paper presents comprehensive findings obtained from an online survey focused on understanding the motivational factors influencing users' consumption of video streaming services from a human factors perspective. The research uncovers a wide range of factors that motivate users to engage in video watching, encompassing both intrinsic and extrinsic motivations. Intrinsic factors include attributes such as *relaxation, inspiration, fun, happiness, enjoyment, good mood, laughter, learning*. On the other hand, extrinsic motivations are driven by *multitasking, recommended feeds, entertainment (time pass, interesting content and diverse content), music, social connection*. The results of the study have design implications, as they shed light on users' underlying needs, expectations, and preferences. Designers and developers can leverage these findings to create more tailored and engaging experiences that align with users' motivations, ultimately enhancing user satisfaction and engagement.

Keywords: Motivation· Human Factors · video streaming · intrinsic · extrinsic · influencing factors

1 Introduction

Video-on-Demand (VoD) streaming services, such as Netflix, YouTube, Amazon Prime, and Disney+ [17] have gained immense traction among users worldwide, offering the convenience of accessing an extensive library of digital content instantly. In this regard, the use of video streaming services has sparked large interest in diverse fields such as User Experience (UX) [2] and Quality of Experience (QoE) [16]. However, despite the exponential growth in streaming video production and consumption, there is a noticeable gap in understanding users' perspectives and the various human factors that influence users' engagement [12]. Much attention has been given to Quality of Experience (QoE) and video

delivery optimization concerning network conditions and application-level factors [8, 1]. However, beyond this level, the impact of human factors on individual user experiences with video streaming services is still not fully understood.

Previous studies have started to investigated the influence of human factors, such as demographic and socio-economic background, physical and mental constitution, on the perceived quality and QoE of streaming services [31, 24, 33, 27, 30]. Additionally, subjective attributes like users' preferences, attitudes, values, and motivation have also been shown to impact users' experiences and QoE [18, 23]. Motivation, in particular, is known to be a crucial factor in determining users' engagement and continued usage of an application. Although the influence of motivation on users' experiences with streaming service is acknowledged, this topic is still largely unexplored and characterised by limited available knowledge [16, 14, 23]. Understanding the driving forces and motivations for users can however provide valuable insights into user expectations, preferences, needs, and tolerance levels with streaming services. These insights can further inform the design and development of personalized and engaging streaming services that cater to the diverse needs of the user base. This understanding is particularly relevant as streaming services gain more prominence and are increasingly associated with excessive consumption patterns like binge-watching [9]. Comprehending the interplay between intrinsic and extrinsic motivational factors can further inform the design of effective incentives and rewards systems which can be strategically integrated into the platform to amplify users' intrinsic motivation. This knowledge can further aid in designing streaming services, (i.e., user interfaces, content recommendations, and personalized experiences) that align with users' motivations and their underlying needs, thereby enhancing user satisfaction and engagement. Furthermore, contributing to the overall understanding of how human factors influence the design and optimization of streaming platforms.

Therefore, the current study investigates the motivations influencing users' consumption of video streaming services from a human factors perspective. More specifically, in this paper we aim to address the following research question: "Which motivational factors do users draw on to watch video streaming content and what may this imply"? Through a comprehensive review of relevant literature and an online survey with 40 participants, we aim to contribute to the limited body of knowledge available. The remainder of the paper is structured as follows: relevant theory and related work is presented in Section 2, and the research methodology is briefly described in Section 3. Section 4 presents the results, and a discussion of the implications are further presented in Section 5. Finally, we provide a conclusion in Section 6.

2 Related Work

2.1 Theoretical Frameworks

Self-Determination Theory: (SDT)[7], has been widely used to better understand human motivation. SDT identifies two different types of motivation. When one's motivation is intrinsic, the activity performed is perceived as inherently enjoyable (e.g., Engaging in a hobby or creative pursuit simply for the enjoyment of it). When driven by extrinsic motivation on the other hand, an activity is performed as it leads to a separable outcome (e.g., Studying for an exam in order to earn a good grade)[7]. SDT further proposes that experiences of the psychological needs of autonomy (personal agency), relatedness (social connectedness), and competence (sense of efficacy), enhance motivation and well-being [29]. For instance, the model presented in [19] builds upon SDT to design for motivation, engagement and well-being in digital experiences. SDT has been applied to active media contexts, such as video games and movement based video games [20, 22, 26]. Zhao et al. (2018) [32] used SDT to investigate different motivational forces (i.e., intrinsic and extrinsic) that drive live streamers' continuance broadcasting intentions. The authors indicate that both intrinsic and extrinsic motivation significantly influenced live streamers' performance expectancies, but not their perceived website attractiveness. Marika (2022)[13] further explored how audiences experience watching on-demand television, and validated and tested how a range of measures predict enjoyment. Results suggest that enjoyment is primarily explained by social significance, immersive viewing, lower levels of deliberate viewing, and positive perceptions of programmed paths.

Uses and Gratification Theory: Another relevant theory which was originally developed to understand mass communication / mass media from an "audience" perspective, is the Uses and Gratification Theory (UGT) [4]. UGT focuses on understanding why and how individuals actively choose and use media to satisfy their specific needs and desires. The theory suggests that specific needs and desires are what drive individual motivation to select and consume media. Rather than considering the audience as passive receivers of media, the theory highlights that individual users are active participants who proactively select and engage with media based on their personal motivations to fulfill their underlying needs. According to the theory, people seek out media content that fulfills their specific needs, such as information, entertainment, social interaction, personal identity, or escapism. It recognizes that individuals have different needs and preferences, and they actively select and consume media to gratify those needs, making media consumption a purposeful and goal-oriented process [4].

Various studies have analysed the usage motives of different types of media drawing one one of the above or even other theoretical perspectives. A study on user motives of using social media identified the following seven unique uses and gratifications: social connection, shared identities, photographs, content, social investigation, social network surfing, and status updating [10, 11]. Similarly on a study conducted with young adolescents, Tanta et al. (2014) [28] mention that

the use of Facebook primarily gratifies adolescents' need for integration, social interaction, information and understanding of their social environment. With respect to watching Television, McIlwraith (1998) [15] identified that "TV addiction" was an attempt by users to distract themselves from unpleasant thoughts, to regulate moods, and to fill time. Furthermore, with respect to understanding motivations to use online streaming services during the covid-19 pandemic using UGT and the Technology Acceptance Model (TAM), authors identified that individuals' perceived usefulness and ease of use of online streaming services were significant antecedents of their intentions to use the services. The authors further suggest that the participants sought emotional gratification from online streaming services, as it allowed to distract themselves into a better mood and to relax in their leisure time. They were also known to be using it to satisfy their needs for information and entertainment [6].

2.2 Human Factors

Human factors in computing refers to the aspect in which people think, perceive, remember, and act that influence the ways they interact with systems [3]. Furthermore, according to [23], a human influence factor (HIF) is any variant or invariant property or characteristic of a human user. The characteristic can describe the demographic and socio-economic background, the physical and mental constitution or the users' emotional state [23]. In this regard, it is widely recognized that users' interactions with streaming services are influenced not only by the attributes of the multimedia system but also by the surrounding environment and circumstances in which the experience occurs [5, 16, 23]. Multimedia experiences and their perceived quality may also vary significantly in terms of perception and endurance for different users, emphasizing their individuality and importance in shaping overall user satisfaction [34, 21]. Wechsung et al. (2011) [31] investigated whether cognitive skills, mood, attitudes and personality traits influence quality perceptions, modality choice (speech vs. touch), and performance. It was identified that attitudes and mood are related to quality perceptions, while performance is linked to personality traits. Furthermore, it was stated that modality choice is influenced by attitudes and personality while cognitive abilities had no effect. In this regard some studies have explored the influence of specific human factors [31, 16, 24].

However, in most empirical studies related to multimedia services, human factors are only considered to a limited extent (e.g., HIFs gender, age, expertise level). Therefore, there is still limited understanding of how human factors influence quality of experience with multimedia services [16].

The current work aims to contribute to the gap in literature by investigating the motivational factors influencing users' consumption of video streaming services. By understanding what drives individuals to engage with streaming services, we gain valuable insights into their underlying needs, preferences, and behaviors. Investigating both intrinsic and extrinsic motivational factors further provides both a holistic understanding of users' engagement with streaming services and a more specific understanding of the implications of these two types

of motivation for what users expect and need in order to have a good or worthwhile experience. Comprehending the interplay between intrinsic and extrinsic motivational factors can further inform the design of effective incentives and rewards systems which can be strategically integrated into the platform to amplify users' intrinsic motivation. This knowledge can further aid in designing streaming services, (i.e., user interfaces, content recommendations, and personalized experiences) that align with users' motivations and their underlying needs, thereby enhancing user satisfaction and engagement. Furthermore, it contributes to the overall understanding of how human factors influence the design and optimization of streaming platforms.

3 Research Methodology

An online questionnaire was developed to better understand users' experiences with and use of video steaming services. The questionnaire aimed towards gaining better insight into how, when, where and why video services are used, and what users care about when using video services in day-to-day life. The questionnaire comprised of a combination of open and closed questions and was structured such that these various aspects of users' experiences and consumption were captured. The questionnaire comprised of various parts. The results presented in this paper pertain to the analysed responses obtained from the specific section of the questionnaire which focused on influencing factors, specifically the motivational factors.

3.1 Sample Description, Data Collection and Analysis

A convenience sampling strategy was used to recruit participants. The online questionnaire was completed by a total of N=40 participants between 18 and 49 years of age (M=30.5 and S.D.=8.4). The sample further comprised of almost equal ratio of male (52.5 %) and female (47.5%) participants. The questionnaire was constructed using the online platform nettskjema[3] and circulated via different channels. The submitted questionnaires were further coded for themes using the Nvivo[4] software. An open coding approach was followed, which is an iterative data analysis technique where categories are added until induction thematic saturation [25] has been induced. It was an inductive process where the themes emerged from the data itself.

4 Results

The open coding process resulted in the identification of 13 categories, placed under the two overarching categories (i.e., intrinsic vs. extrinsic). In the following, we present unique selected quotes that illustrate the emerged categorization. The coding was further performed to keep the specific keywords intact as opposed to merging with other codes.

[3] https://nettskjema.no/
[4] https://portal.mynvivo.com/

4.1 Intrinsic Factors

The various categories that were intrinsic in nature (i.e., actions which are perceived inherently as interesting or enjoyable), were included within this categorisation. The concepts of *fun* (experience of amusement or playfulness), *enjoyment* (feeling of satisfaction and pleasure), *good mood* (state of positive emotions), and *happiness* (a state of well-being and contentment) are related but distinct emotional states. Therefore, they were grouped separately during the open coding process to allow for capturing nuanced user experiences. Separating these factors further allows for a more comprehensive understanding of how each emotional state influences users, leading to richer insights and targeted interventions.

Relaxation Several of the participants indicated that they were motivated to watch videos for relaxation. Participant 14 (Male, 49 yrs) indicated to watch VOD content *"to get relaxed"*. Participant 31 (Male, 31 yrs) also indicated that *"I am usually relaxed after a movie"*. Other participants stated that watching videos allowed *"to disconnect"* (P18, Female, 22 yrs) and that they watch to *"[...] to take my mind off things"* (P25, Female, 26 yrs).

Inspiration Participants indicated that they found watching videos to be inspiring and motivating with respect to different aspects. For example, to learn certain skills, such as playing the piano. As Participant 10 (Female, 20yrs) said:*"piano tutorials have motivated me"*. Similarly, P36 mentioned that book reviews inspire her to start a new book: *"book/series review on BookTube got me really excited to start reading a new book"*(P36, Female, 30 yrs). Another participant further indicates that such inspiration is dependent on content: *"Good content inspires"* (P38, Male, 37 yrs).

Fun Several participants mentioned that they found watching videos to be a fun activity:*"It is fun"* (P11 Male, 22 yrs). It was further mentioned that it was an easy, not very demanding way to have fun. For instance, participant 07 (Female, 18 yrs) said that she watches videos *"when I want to have fun without effort"*.

Happiness A number of participants mentioned that they feel happy watching videos, or as participant 32 (Male, 28 yrs) puts it, watching videos *"brings happiness"*. Participant 08 further says that watching funny content makes her happy:*"Often watch something funny so I feel happier"* (P08, Female, 21 yrs).

Enjoyment Several participants mentioned enjoying watching videos. P37 also indicated that she enjoyed content related to a specific genre:*"I enjoy true crime series"* (P37, Female, 41 yrs).

Good Mood Many participants mentioned that watching video content helps to get into a positive mood, e.g., Participant 05 (Female, 29 yrs) indicated to watch videos to *"get into a good mood"*.

Laughter Numerous participants mentioned that they watch videos to get a good laugh: for instance, Participant 07 (Female, 18 yrs) said that when watching videos *"I laugh if I am alone"*. Similar to the other intrinsic factors, participants also indicated the importance of content with respect to laughter: *"Saw an episode of my favorite series that made me laugh out loud"* (P11, Male, 22 yrs). Or as participant 38 (Male, 37 yrs) phrased it: *"Watched a couple of comedy videos and had a good laugh"*.

Learning Learning was identified as another influencing factor as several participants mentioned that acquiring knowledge from documentaries, tutorials, lectures and other scientific content was a main motivation to watch videos. For instance, Participant 18 (Female, 22 yrs) referred to*"something professional to learn"* as a motivation to watch. Watching video content was also referred to as a way to get news and be up to date. Or as Participant 27 (Male, 38 yrs) put it, the motivation for watching is *"to get news and updates"*.

4.2 Extrinsic Factors

The identified quotes which were extrinsic in nature (leading to a separable outcome) were classified within this category.

Multitasking Participants indicated that they were motivated to watch videos as it was done in parallel to other activities. Numerous participants indicated watching videos while eating: *Videos are my company when I eat* (P05, Female, 29 yrs). Furthermore, it was also an activity done in combination with other tasks, e.g., in order *"not to be bored when doing menial tasks"*(P36, Female, 30 yrs).

Recommended Feed The recommender systems providing videos was indicated to motivate participants to watch the suggested videos, for instance Participant 06 (Male, 26 yrs) was motivated to watch because *"I get recommended videos"*.

Entertainment Numerous participants further mentioned that being entertained was a main motivating factor:*"I watch for entertainment"*(P16, Female, 49 yrs).
Entertainment has further been categorized into the following three subcategories (i.e., Time pass, Interesting content, Diversity of content).

- **Time Pass** Participants indicated that watching videos was a way to *"make time pass"* (P12, Male, 22 yrs). Participant 34 (Male, 25 yrs) hinted at a similar motivation :*"no benefits, just to get by the day"*.

- **Interesting Content** Watching interesting content was mentioned by several participants as motivating. For instance Participant 20 (Female, 42 yrs) referred to a *"particular interest in the video content"*, whereas Participant 13 (Male, 22 yrs) felt motivated by watching *"interesting video concepts"*.
- **Diversity of Content** Having diverse types of content to watch was further also mentioned as another motivating factor: *"I like that I can find more international movies or videos with more diversity of people"* (P29, Female, 33 yrs). Participant 33 (Male, 32 yrs) further mentioned that he watches different types of content :*"to explore my different areas of interest"*.

Music Listening to and watching music videos was mentioned as another motivation, for example by Participant 30 (Female, 25 yrs) who indicated that *"I like to watch music videos"*. It was also indicated that some participants only listen to music videos without watching the actual video.

Social Connection Finally, watching videos with others as a social activity was mentioned by several participants. For instance participant 03 (Female, 29 yrs) describes her motivation as:*"Have a good time watching movies with friend(s). The social experience makes it pleasant for me"*.

5 Discussion

The findings above support the observation that different motivational factors may have different underlying needs, trigger different types of user behavior, and these various use cases have to be explored further to better understand user behavior pertaining to different contexts. However, from the identified motivations, we can infer the underlying needs and desires that these motivations are trying to fulfill.

- *Relaxation*: This factor may fulfill the need for stress reduction, mental rejuvenation, and a break from daily routines. People may seek relaxation while watching streaming videos to unwind, find peace of mind, and experience a sense of calmness.
- *Inspiration*: The need here might be to gain inspiration, by streaming videos that stimulate creativity, trigger new ideas, or showcase achievements, encouraging the users to aspire for personal growth and pursue their passions.
- *Learning*: The need for acquiring knowledge or learning may be characterized by accessing streaming videos that provide educational content, informative documentaries, or tutorials, allowing individuals to acquire new knowledge, develop skills, and expand their understanding of various subjects.
- *Fun, enjoyment, good mood, happiness, and laughter*: These are all factors that may fulfill the need for experiencing positive emotions. Streaming videos that are enjoyable, humorous, or uplifting may provide individuals with a sense of joy, amusement, and satisfaction (i.e., emotional gratification as mentioned in [6]). This may also be an attempt by users to distract themselves from unpleasant thoughts, and to regulate their moods [15].

- *Multitasking*: This may fulfill the need for productivity and efficiency. Users may watch streaming videos while engaging in other activities to optimize their time and achieve a sense of accomplishment in different areas.
- *Recommendations*: This may satisfy the desire for personalized suggestions and guidance. Users may seek recommendations to discover new and interesting content that aligns with their preferences, saving time and effort in finding engaging videos.
- *Entertainment* : The need for entertainment encompasses various aspects, including time pass (filling leisure time), interesting content, and diversity of content. The factors may fulfill the desire for engaging and diverse experiences that cater to individual preferences and provide autonomy [7] by presenting a range of options to choose from. This may also be related to attaining emotional gratification [6] and a way of experiencing positive emotions.
- *Music*: Streaming videos that feature music may fulfill the need for auditory stimulation, enjoyment, and a connection to different emotions.
- *Social Connection*: It may fulfill the need for social engagement, community building, and connecting with like-minded individuals [28].

The results may further have the following implications. The coded intrinsic motivational factors (e.g., relaxation, inspiration, etc.,) influencing users to watch videos, seem to be largely dependent on the content. While which genre of videos is considered fun or relaxing or happy may be very subjective, it could be argued that the identified intrinsic motivational factors are dependent on content nonetheless. Therefore, content may be of more significance when the motivation is triggered by the identified intrinsic factors. More concretely, content may play an important mediating role to trigger intrinsic motivation. However, with respect to the extrinsic factors, the importance of content was reflected only with respect to entertainment, specifically in terms of having interesting and diverse content. This raises the question whether video quality may be of more significance in the context of the intrinsic factors, since poor video quality may inhibit users from achieving the various intrinsic states. This is not to say that content and video quality are not important in the case of extrinsic factors. However, most of the extrinsic motivational factors place more significance on utilitarian aspects such as multitasking, time pass, listening to music, and social connection, which may in many cases not be too much dependent on content and quality as compared to all the intrinsic influencing factors which seem to be largely dependant on content and potentially its quality.

All these motivational factors may impact users' perception of the video, its quality and their overall satisfaction with the experience. Connected to this, the purposes for which the service are used may also largely influence users' experience. For example, if a user is watching a video for serious purposes such as learning/education, they may expect clear and accurate information that is presented coherently and in a way that is easy to understand. If the video fails to meet these expectations, the user's experience may be negatively impacted. On the other hand, if a user is consuming videos for entertainment purposes, they

may overlook any minor technical issues if the video is engaging and enjoyable from their subjective experience. However, more lab and field studies explicitly addressing the link between viewing motivations, QoE and tolerance towards different types of impairments, are needed. Future studies can also focus on analysing the correlation between user needs, their motivations and user behavior. Such more fine-grained insights would allow for better tailoring of services to meet the specific needs and preferences of their users, leading to a higher level of satisfaction and better viewing experience.

6 Conclusion

The main aim of the study was to better understand motivational factors influencing users' consumption of video streaming services from a human factors perspective. The results indicate a combination of intrinsic and extrinsic motivational factors which users draw on, that might influence their overall experience with such services. The participants were intrinsically motivated by *relaxation, inspiration, fun, happiness, enjoyment, good mood, laughter, learning*, and extrinsically motivated by *multitasking, recommended feeds, entertainment (time pass, interesting content and diverse content), music and social connection*. By understanding what drives individuals to engage with streaming services, we gain valuable insights into their underlying needs, preferences, and behaviors. Investigating both intrinsic and extrinsic motivational factors further provides a holistic understanding of users' engagement with streaming services. The findings also suggest that when users are triggered by intrinsic factors, quality and content of the videos may be of more importance. However, when triggered by the extrinsic factors, utilitarian aspects such as multitasking, in addition to motivation factors such as time pass, listening to music, and social connection seem to be more important. The latter may not be too much dependent on content and quality of videos. Follow-up empirical studies are needed to validate these findings and to further understand the relation between intrinsic and extrinsic motivation for watching video content further.

Overall this knowledge can further aid in designing streaming services, that align with users' motivations and their underlying needs, thereby enhancing user satisfaction and engagement. Furthermore, it contributes to the overall understanding of how human factors influence the design and optimization of streaming platforms.

6.1 Acknowledgments

The research leading to these results has received funding from the Norwegian Financial Mechanism 2014-2021 under project 2019/34/H/ST6/00599.

References

1. Barman, N., Martini, M.G.: Qoe modeling for http adaptive video streaming–a survey and open challenges. Ieee Access **7**, 30831–30859 (2019)

2. Bentley, F., Silverman, M., Bica, M.: Exploring online video watching behaviors. In: Proceedings of the 2019 ACM International Conference on Interactive Experiences for TV and Online Video. p. 108–117. TVX '19, Association for Computing Machinery, New York, NY, USA (2019). https://doi.org/10.1145/3317697.3323355, https://doi.org/10.1145/3317697.3323355
3. Blandford, A.: Human Factors in Computing, p. 791–794. John Wiley and Sons Ltd., GBR (2003)
4. Blumler, J.G., Katz, E.: The uses of mass communications: Current perspectives on gratifications research. sage annual reviews of communication research volume iii. (1974)
5. Brunnström, K., Beker, S.A., De Moor, K., Dooms, A., Egger, S., Garcia, M.N., Hossfeld, T., Jumisko-Pyykkö, S., Keimel, C., Larabi, M.C., et al.: Qualinet white paper on definitions of quality of experience (2013)
6. Camilleri, M.A., Falzon, L.: Understanding motivations to use online streaming services: integrating the technology acceptance model (tam) and the uses and gratifications theory (ugt). Spanish Journal of Marketing-ESIC **25**(2), 217–238 (2021)
7. Deci, E.L., Ryan, R.M.: Self-determination theory. (2012)
8. Garcia, M.N., Argyropoulos, S., Staelens, N., Naccari, M., Rios-Quintero, M., Raake, A.: Video Streaming, pp. 277–297. Springer International Publishing, Cham (2014). https://doi.org/10.1007/978-3-319-02681-7_19
9. Granow, V.C., Reinecke, L., Ziegele, M.: Binge-watching and psychological well-being: media use between lack of control and perceived autonomy. Communication Research Reports **35**(5), 392–401 (2018)
10. Joinson, A.N.: Looking at, looking up or keeping up with people? motives and use of facebook. In: Proceedings of the SIGCHI conference on Human Factors in Computing Systems. pp. 1027–1036 (2008)
11. Karapanos, E., Teixeira, P., Gouveia, R.: Need fulfillment and experiences on social media: A case on facebook and whatsapp. Computers in human behavior **55**, 888–897 (2016)
12. Lagger, C., Lux, M., Marques, O.: What makes people watch online videos: An exploratory study. Comput. Entertain. **15**(2) (apr 2017). https://doi.org/10.1145/3034706, https://doi.org/10.1145/3034706
13. Lüders, M.: Self-determined or controlled, seeking pleasure, or meaning? identifying what makes viewers enjoy watching television on streaming services. Poetics **92**, 101639 (2022)
14. Malinovski, T., Vasileva, M., Vasileva-Stojanovska, T., Trajkovik, V.: Considering high school students' experience in asynchronous and synchronous distance learning environments: Qoe prediction model. The international review of research in open and distributed learning **15**(4) (2014)
15. McIlwraith, R.D.: "i'm addicted to television": The personality, imagination, and tv watching patterns of self-identified tv addicts. Journal of Broadcasting & Electronic Media **42**(3), 371–386 (1998)
16. Möller, S., Raake, A.: Quality of experience: advanced concepts, applications and methods. Springer (2014)
17. Moro-Visconti, R., Moro-Visconti, R.: From netflix to youtube: over-the-top and video-on-demand platform valuation. Startup Valuation: From Strategic Business Planning to Digital Networking pp. 309–339 (2021)
18. Msakni, H.G., Youssef, H.: Is qoe estimation based on qos parameters sufficient for video quality assessment? In: 2013 9th International Wireless Communications and Mobile Computing Conference (IWCMC). pp. 538–544. IEEE (2013)

19. Peters, D., Calvo, R.A., Ryan, R.M.: Designing for motivation, engagement and wellbeing in digital experience. Frontiers in psychology p. 797 (2018)
20. Przybylski, A.K., Rigby, C.S., Ryan, R.M.: A motivational model of video game engagement. Review of general psychology **14**(2), 154–166 (2010)
21. Redi, J.A., Zhu, Y., De Ridder, H., Heynderickx, I.: How passive image viewers became active multimedia users: New trends and recent advances in subjective assessment of quality of experience. Visual signal quality assessment: Quality of experience (QoE) pp. 31–72 (2015)
22. Reinecke, L., Tamborini, R., Grizzard, M., Lewis, R., Eden, A., David Bowman, N.: Characterizing mood management as need satisfaction: The effects of intrinsic needs on selective exposure and mood repair. Journal of Communication **62**(3), 437–453 (2012)
23. Reiter, U., Brunnström, K., De Moor, K., Larabi, M.C., Pereira, M., Pinheiro, A., You, J., Zgank, A.: Factors influencing quality of experience. Quality of experience: Advanced concepts, applications and methods pp. 55–72 (2014)
24. Sackl, A., Masuch, K., Egger, S., Schatz, R.: Wireless vs. wireline shootout: Howuser expectations influence quality of experience. In: 2012 Fourth International Workshop on Quality of multimedia experience. pp. 148–149. IEEE (2012)
25. Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., Jinks, C.: Saturation in qualitative research: exploring its conceptualization and operationalization. Quality & quantity **52**, 1893–1907 (2018)
26. Subramanian, S., Dahl, Y., Skjæret Maroni, N., Vereijken, B., Svanæs, D.: Assessing motivational differences between young and older adults when playing an exergame. Games for Health Journal **9**(1), 24–30 (2020)
27. Suznjevic, M., Skorin-Kapov, L., Cerekovic, A., Matijasevic, M.: How to measure and model qoe for networked games? a case study of world of warcraft. Multimedia Systems **25**, 395–420 (2019)
28. Tanta, I., Mihovilović, M., Sablić, Z.: Uses and gratification theory–why adolescents use facebook? Medijska istraživanja: znanstveno-stručni časopis za novinarstvo i medije **20**(2), 85–111 (2014)
29. Vansteenkiste, M., Ryan, R.M., Soenens, B.: Basic psychological need theory: Advancements, critical themes, and future directions. Motivation and emotion **44**, 1–31 (2020)
30. Walton, T., Evans, M.: The role of human influence factors on overall listening experience. Quality and User Experience **3**, 1–16 (2018)
31. Wechsung, I., Schulz, M., Engelbrecht, K.P., Niemann, J., Möller, S.: All users are (not) equal-the influence of user characteristics on perceived quality, modality choice and performance. In: Proceedings of the Paralinguistic information and its integration in spoken dialogue systems workshop. pp. 175–186. Springer (2011)
32. Zhao, Q., Chen, C.D., Cheng, H.W., Wang, J.L.: Determinants of live streamers' continuance broadcasting intentions on twitch: A self-determination theory perspective. Telematics and Informatics **35**(2), 406–420 (2018)
33. Zhu, Y., Guntuku, S.C., Lin, W., Ghinea, G., Redi, J.A.: Measuring individual video qoe: A survey, and proposal for future directions using social media. ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM) **14**(2s), 1–24 (2018)
34. Zhu, Y., Hanjalic, A., Redi, J.A.: Qoe prediction for enriched assessment of individual video viewing experience. In: Proceedings of the 24th ACM international conference on Multimedia. pp. 801–810 (2016)