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Current cases of and motivations for second screen use by generation Z: university students

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ABSTRACT

Second screen use is becoming increasingly popular among young people. Türkiye can be expressed as a place where the use of devices such as TV, phone, tablet and computer is widespread. This study, which is based on the uses and gratifications approach, seeks answers to the following questions: a) which devices are used as second screens, b) with which TV programs they are used, c) with what kind of motivations they are used by Generation Z members who still watch TV. We collected data from university students using a questionnaire and the convenience sampling method, which is a type of non-probabilistic sampling, through SPSS. The data showed that Generation Z primarily uses smartphones as second screens, and only a few use second screen applications on their mobile phones. Music programs are the most popular thematic programs watched together with the second screen. Women tend to use their second screens for watching series and shopping. Generation Z prefers using a 'smartphone with computer' as a second screen. Future studies could investigate the motivations of students and academics to use second screens in distance education. Additionally, future studies can investigate the usage habits of second screens in second language learning.

Introduction

It is a generally known fact that 97.1% of the world's population has smartphones while the 64.4% of it has computers and 34.3% of it has tablets. Each individual worldwide spends 6 hours 54 minutes on the internet and 3 hours 24 minutes watching television (We are social, 2022). In Turkey, a country with a population of 85.30 million, there are 68.9 million social media users and 69.95 million internet users, while there are 76.89 million smartphone users. On average, people in Turkey watch TV for 8 hours a day (Datareportal, 2022) and spend a total of 7 hours on the internet, three of them on social media (Web Tekno, 2022). In Turkey, the vast majority of Generation Z, whose 97% have smartphones, uses their smartphones for 4 hours in a day on average, while 66% of them use social media (Marketing Türkiye, 2022), and watch TV for nearly 3 hours (RTÜK, 2022).

As per the research that investigates whether individuals are online on second screen devices while watching TV or not, 'the participants in selected 40 countries are asked if they connect to the Internet via another device (like the computer, smartphone or tablet).' More than half of the TV audience in the 36 countries out of 40, which makes up the participant group, utters that 'they connect to the Internet via another device while watching TV.' In the remaining 4 countries, only less than half of TV audience expresses that they connect to the Internet (Statista, 2020). In another research, 34 of 42 selected countries, one of them being Turkey, it is seen that smartphones are mostly used for connecting to the Internet while watching TV, and in 7 countries, the most used device for connecting

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to the Internet is the computer. In the remaining countries, smartphones and computers are used equally while connecting to the Internet (Statista, 2020).

In previous research studies, various topics related to second screen use were discussed (Cheng et al., 2023; Chung et al., 2023; Etura Hernandez et al., 2023; Intyaswatı et al., 2023; Kannas et al., 2023; Lee, 2021; Navarro et al., 2022; Malka et al., 2023; Valecha & Jaggi, 2020). The following questions are currently unanswered in the literature: 1) What devices do Gen Z mostly use as a second screen, and how important is this practice? 2) What types of TV programs do Gen Z watch while using their second screens? 3) What motivates Gen Z to use a second screen? This study aims to fill this gap in the literature by identifying: a) the devices most commonly used by Gen Z as a second screen, b) the TV programs most frequently watched while using a second screen, and c) the second devices most commonly used simultaneously. The secondary goal of this study is to (d) identify the motivations behind using second screens for Generation Z and (e) investigate whether it depends on gender or not. On this basis, we researched what second screen means, the advantages and disadvantages of using it, and the fields/aims of its use with the help of extensive literature and fieldwork (Guo, 2019). Investigating active audience behaviors helps to better understand the process of participation in social television and to make suggestions for future studies.

In the study, which parallels the paradigm of the Uses and Gratifications approach that actively accepts users, the Internet and social media are not only a source of information and entertainment, but also platforms for social interaction and self-expression for Generation Z, which is an extremely active and selective generation in media consumption.

Literature review

The concept of the second screen emerged in the 1990s, around the same time that interactive television research began (Basapur et al., 2012). The second screen refers to the use of digital devices such as smartphones, tablets, and computers to access social network sites and participate in discussions or interact with other audience members while watching TV (Crowdpark, 2011; Dias, 2016; McGregor et al., 2007). People who use a second screen while watching TV are called 'second screen users' (Gil de Zúñiga et al., 2015). To fully understand this phenomenon, it is important to consider the motivations behind the audience's interaction and use of the second screen (Blake, 2017). Generation Z is socializing more by actively using media content with their second screen usage. According to the Uses and Gratifications approach, media is a tool used to meet these personal and social needs.

Although studies are showing that individuals use a second device while watching television even before computers, tablets, and smartphones took their place in daily life (Geerts et al., 2014), 'The practice of using the second screen,' which has become more and more phenomenal today (Giglietto & Selva, 2014), is becoming increasingly common (Shim et al., 2017). The second screen, which emerges naturally with the increase in the use of devices such as tablets, computers, and phones (Brown et al., 2019), enhances the interactive television experience (Cruickshank et al., 2007). While the second screen used for the watched TV content contributes more to the viewer about the content, when it is used independently of the content watched on TV, it can have an impact on the content (Ran & Yamamoto, 2019). It is also stated that the use of second screens changes media consumption habits and enables individuals to approach media sources more critically and effectively (Cheng et al., 2023).

We can mention an interaction between second screen use and 'internet and social network sites,' which comprise the components of new media. People can communicate with each other thanks to the opportunities provided by the Internet with cost control (Lupia & Sin, 2003) through communication technologies (Cho et al., 2009). They communicate this way to both discuss (Southwell & Torres, 2006) and exchange information (McGregor et al., 2007). It must be noted down that the exchange and dissemination of information are much easier through social network sites (Southwel & Yzer, 2007), and the more people receive information through social media, the more they have the possibility to give this information out on the Internet (Weeks & Holbert, 2013). TV audience uses applications that

generate new media (social media, digital platforms, etc.) and desire to become more actively involved in the process and become individuals who make up their minds about what to watch (Shim et al., 2017). In this way, the audience turns their individuality into socialization/sociality (Gil de Zúñiga et al., 2019). These data increase the rates of using second screen devices while watching TV. The television, regarded as the second most important medium following new media (PwC, 2022), preserves its central position in the sitting room, however, its centrality sometimes is replaced with second screens and sometimes lost (Wilson, 2016) since the balance between first and second screens depends on the gratification sought by the audience and the need of audience (Cunningham & Eastin, 2017).

From the perspective of Kroon (2017), the focus of the audience, whose attention has shifted to the second screen, is tried to return to the TV. In such an environment, second screen applications such as QR codes, hashtags, and voice verification were developed so that the audience would be able to use and get warned against television (Angeluci et al., 2017) Although this type of second screen applications motivate the audience as it contributes to their personal experience (Cerny & Donahoo, 2018), offers a kind of 'unison experience' (Angeluci et al., 2017) and gives more freedom to control screen time, the audience prefers using second screen applications less (Lee et al., 2018).

Being importance also for marketing experts, second screen applications are regarded as complementary and ancillary equipment in marketing campaigns (Vanattenhoven & Geerts, 2016). What needs to be considered here is that the second screen (smartphones, tablets, computers, etc.) is not replacing with first screen (TV) but rather becoming an ancillary device used for completing the first screen experience (Cunningham & Eastin, 2017).

Many researchers have examined the advantages and disadvantages of using a second screen. According to these researches, the audience who uses a second screen while watching TV: can get support for cultural and linguistic issues that are hard to understand and learn, collect information about specific topics, and prepare personal learning schedules/plans (Fallahkhair et al., 2005), while watching the news remember what they watch less than those who do not use a second screen (Cauwenberge et al., 2014), can vote for TV programs, do online shopping (the producers may get feedback from the audience), and can be less productive while performing multiple duties (Macrì, 2016), can have conversations about what they watch with their friends and share it on social network websites (Medina et al., 2015), can interact personally and multiply with advanced usable technological opportunities (Mendes Costa Segundo & Santos, 2013), can have difficulties focusing on the first screen while using the second screen and have cognitive troubles (Emmerich et al., 2014), may end up having an attention deficit, yet using a second screen may offer the opportunity to pay more attention to TV programs (Gil de Zúñiga et al., 2015; J. Jensen et al., 2015), may enable them to join TV shows interactively (Davis & Yung, 2005).

The second screen use varies from one place and one reason to another. For example, the majority of the football fans in front of the television actively use WhatsApp and when they do so, they increase their entertainment (Weimann-Saks et al., 2020). Another research has argued that 79% of sports program audiences surf on social media independent of the program's content, while 69% of them research sports (Rubenking & Lewis, 2016). The research conducted on 23 countries by Statista has detected that more than half of the TV audience uses second screens independent of what they watch. The research has also stated that the followers of the 2017 Winter Olympics and 2018 FIFA World Cup use second screens during sports competitions (Statista, 2020).

Since TV audiences can access more visual content about the TV programs they follow (Wiehl, 2014), they may use their mobile devices as second screens so often (Petrangeli et al., 2015). The second screen uses may change due to the use of interactive screens and to the TVs' ability to connect to the Internet (Horning, 2017) to introduce and distribute the content and promote interaction. Here, the audience prefers using certain media depending on the gratifications they provide and the needs they meet (Dimmick, 2003). The theoretical foundation of this research within the scope of the information above is comprised of a 'uses and gratifications approach' to identify the devices used by TV audiences and the type of gratification they feel after.

Arguing that the studies based on the Uses and Gratifications approach contrast with the classical mass communication research formulations, Katz supports his thought by asking 'What do people do with the media?' instead of "What does media do to people? (Katz, 1959). It is stated that the psychological and social environment of the audience, their needs, and motivations for communication, attitudes and expectations about the media, functional alternative approach to using communication tools, communication behaviours and their watching attitudes following the behavior generate the basic components of Uses and Satisfactions theory (Rubin, 2009). Ultimately, while the individuals using second screens see a decrease in their real-time needs, they feel satisfied at the same time as per Uses and Gratifications approach (Wang & Tchernev, 2019). The fact that they have grown up intertwined with digital technologies, which is one of the most distinctive features of Generation Z, has a significant impact on media consumption habits and expectations. The Uses and Gratifications approach, which tries to understand the purposes for which individuals use media content in media studies and how they get satisfaction from these uses, provides a theoretical framework for our study in this respect.

Theoretical framework

The Uses and Gratifications approach provides an appropriate theoretical framework for understanding the media consumption habits of Generation Z and the motivations underlying these habits. From the perspective of this approach, we can say that Generation Z is active, selective and critical in media consumption and uses media content to meet its personal and social needs. The theory offers important clues in understanding the media choices and usage patterns of these users. Because, when a researcher is about to design research on young people habits of using technology, digital media, social media, etc., he/she needs to reconsider and re-use the approach of Uses and Gratifications (Dunas & Vartanov, 2020).

Katz, the creator of the Uses and Gratifications theory, underlines the reason people consume media rather than the way the media affects people (Katz et al., 1973–1974). This approach of Uses and Gratifications guides communication researchers to investigate the aims of using mass communication tools by the audience who interacts with the media (Smock et al., 2011) and expresses that people make their choices and decisions actively to meet their own psychological and sociological needs (Ji, 2019) and thus tries to explain generally what individuals, groups and societies do with the media (K. Jensen & Rosengren, 2005). The interaction and socialization rate of the audience using the second screen (Gil de Zúñiga et al., 2019) strengthens the foundation of this Uses and Gratifications theory (Ruggiero, 2000) since the degree of control of the participants increases during the communication process (Angeluci et al., 2017). As the focus shifts to the new media tools, the real-time needs of second screen users decrease in an environment where the increasing originality of the Uses and Gratifications approach is being mentioned (Su & Chen, 2020) and the users may feel satisfied according to this very theory (Wang & Tchernev, 2019).

Methodology

The study aims to reveal the second screen usage habits and motivations of the Z generation. In the study where we adapted the basic question of the Uses and Gratifications Approach, what does Generation Z do using a second screen? based on the question, many hypotheses have been developed. In this direction, the following questions and hypotheses were formed. Generation Z based on Uses and Gratification Theory:

RQ1: What are the devices most used by them as the second screen?

RQ2: With Which types of television programs (series, documentaries, sports, music, etc.) do they use second screen devices most simultaneously?

RQ3: Does Generation Z use the second screen about the content being watched at that moment?

RQ4: Do the motivations behind using second screen depend on gender?

Considering these questions, the following hypotheses are generated:

H1: The majority of the TV audience Generation Z does not depend on only one screen.

H2: Generation Z becomes more active, interactive, and involved when they use a second screen.

H3: The second screen device used by Gen Z while watching TV depends on gender and program type.

H4: The motivation behind using a second screen differs from one gender to another.

Data collection & sampling

Turkey can be expressed as a place where the use of devices such as TVs, phones, tablets and computers is widespread. As stated in the introduction of the article, the Z generation, born into technology, consumes the screen too much. This causes the Z generation to be selected as a sample and to be the subject of research. Throughout this study, fieldwork was carried to measure the habits of second screen use and motivations of Generation Z. Out of quantitative methods, the questionnaire technique was used as data collection tool.

The research universe consists of Akdeniz University students in Turkey. The number of students enrolled in Akdeniz University is known to be 65.043, so the sample size must be at least (minimum) 382 (Tutar & Erdem, 2020). In addition, the Table 1 showing how large the sample size should be according to the size of the universe is presented below (Ural & Kılıç, 2005).

In such a sample, the confidence level is 95% while a rate of 5% is accepted as the error margin (Creswell & Demir, 2017, s. 159). During the research 'easily accessible sample' was used and 455 individuals were accessed. This sample was used since it fits the research, makes it possible to access the targeted number in a short time, and is budget-friendly. Moreover, this

Table 1. Sample size vs. Population size.

N: Universe Size Volume n: Sample Size Volume				
N – n	*N – n*	*N – n*	*N – n*	*N - n*
10 – 10	100 – 80	280 – 162	800 – 260	2800 – 338
15 – 14	110 – 86	290 – 165	850 – 265	3000 – 341
20 – 19	120 – 92	300 – 169	900 – 269	3500 – 346
25 – 24	130 – 97	320 – 175	950 – 274	4000 – 351
30 – 28	140 – 103	340 – 181	1000 – 278	4500 – 354
35 – 32	150 – 108	360 – 186	1100 – 285	5000 – 357
40 – 36	160 – 113	380 – 191	1200 – 291	6000 – 361
45 – 40	170 – 118	400 – 196	1300 – 297	7000 – 364
50 – 44	180 – 123	420 – 201	1400 – 302	8000 – 367
55 – 48	190 – 127	440 – 205	1500 – 306	9000 – 368
60 – 52	200 – 132	460 – 210	1600 – 310	1000 – 370
65 – 56	210 – 136	480 – 213	1700 – 313	15000 – 375
70 – 59	220 – 140	500 - 217	1800 – 317	20000 – 377
75 – 63	230 – 144	550 – 226	1900 – 320	30000 – 379
80 – 66	240 – 148	600 – 234	2000 – 322	40000 – 380
85 – 70	250 – 152	650 – 242	2200 – 327	50000 – 381
90 – 73	260 – 155	700 – 248	2400 – 331	75000 – 382
95 – 76	270 – 159	750 – 254	2600 – 335	1000000 – 384

method was preferred because it was thought that more clear answers to the research questions could be obtained. In other words, due to the limitations of this study, this type of method was preferred not only to measure the motivation of university students who use second screens, but also to determine how many of the university students are second screen users or not. In this way, the findings; In parallel with the research questions, it will be easier to generalize it to the population. However, if a study is to be designed that includes only students using second screens, then working with one of the probability sampling methods will provide more useful data for the researchers' questions and hypotheses. For a balanced distribution, random participants were included in the questionnaires from all faculties. The data were collected through interviews with 455 people on the campus of Akdeniz University in April 2022. 17 questionnaires were not included in the study since they were mistaken and incomplete while 438 questionnaires were included in the research. In addition, ethics committee permission was obtained from Akdeniz University Ethics Committee with document date and number '21.04.2022 -344,341.'

Instrumentalization

A questionnaire consisting of three parts was used in the research: 'The demographic Information Form, Technology Usage Habits Form, and Second Screen Usage Motivations Form.' Demographic Information Form: In this section, the participants; gender in order to analyze whether the motivations for using technology and second screens differ according to gender; the age of the participants to have the average age information; type of accommodation to determine whether they have a television or whether they have a suitable environment for watching television; To determine whether the distribution is balanced or not, questions were asked about their faculties. In total, four questions were asked. Technology Usage Habits Form: In this section, the participants; whether they currently live and have a television in their family home, whether they watch television, how much they watch per day, what communication devices they have to use as a second screen, which two screens they use most together, how often they use social networking sites, whether they use a second screen application or not. The answers to the questions of which digital platforms they do not use and which digital platforms they subscribe to were sought.

A total of 14 open-ended, closed-ended, multiple-choice, graded (1 most, 2 medium, 3 less) questions were created during the literature readings for the research. It is thought that these answers are the reasons that form the infrastructure of the process leading to the use of the second screen. So much so that the data obtained in this section were compared with the second screen usage motivations section and binary analyses were made. Second Screen Usage Motivations Form: In this section, 7 questions were asked in the first place, seeking answers to the participants' second screen use. Immediately afterward, 18 rated questions were asked. The questions were compiled from the scales developed by Shim et al. in 2015, and the scales developed by Lim et al. in 2017, second-screen statistical research by the American Statista company, and literature readings (Shim et al., 2015, 2017; www.statista.com). The questions were created using a 7-point Likert type. However, as a result of expert opinions, the questions were not adapted to Turkish as a scale, so they were not used as a 7-point Likert scale. For the participants to give clearer answers; I disagree (1), I am undecided (2), and I agree (3).

Measurement

Gratifications and motivations: preference to use the second screen with or without the content watched

The questions and motivation items were created based on previous studies that investigate 'searching for information, entertainment, self-expression, spending time, interpersonal interaction' (Hunt et al.,

2012) and 'habit, relaxation, escape and social interaction' (Godlewski & Perse, 2010), scales developed by Shim et al. (2015) and Shim et al. (2017), second screen statistical researches conducted by American Statista company (Statista, 2020) and literature readings. The questions were designed as (1) Disagree, (2) Indecisive and (3) Agree to enable participants to give clearer answers. In addition, it was asked whether there was a TV in the place where they lived and in their family homes (two different types of accommodation were asked since they were university students) and how much TV they watched per day.

Tv – smartphone, coumputer, tablet multitasking frequency

The frequency of TV – smartphone, Coumputer, Tablet multitasking was measured by one question: 'What second screen device do you use while watching TV and the response categories ranged from none (1), rare (2), often (3).'

Second screen devices used simultaneously choice

Second Screen Devices Used Simultaneously Choice was measured by one question: Which two screens do you use most often at simultaneously and as the response participants were asked to mark two screens they used simultaneously.

Second screen usage preference according to the type of tv program watched

Second screen usage preference according to the type of tv program watched was measured by one question: 'With which program do you use your second screen devices at the utmost and the response categories ranged from none (1), rare (2), often (3).' TV program types (Rubenking & Lewis, 2016) and content (such as entertainment and information) (Su & Chen, 2020) can affect the second screen usage preference.

Interaction

Whether participants interact using the second screen was measured by 4 questions: 'what second screen devices (such as smartphones, computers, tablets) they have,' 'which social media apps they use,' 'how much time they spend on social media,' 'whether they feel more active when they use a second screen.'

Attention deficit

A question was asked about whether using a second screen distracts the second screen user: 'Do you get distracted when you use your second screen devices while watching TV?.' Response categories ranged from none (1), rare (2), often (3).

Frequency of second screen apps use

Frequency of Second Screen Apps Use was measured by one question: 'Is there a second screen app you use? (Click 'other" if you don't use it). Response categories ranged from none (1), rare (2), often (3).

Data analysis & reliability

The data analysis was conducted using the SPSS package. Data control was made by the researchers and incomplete and mistaken data were corrected. Frequency and percentage analysis were used in

data analysis while the chi-square analysis method was employed in the comparison of categorical variables. In the statistical comparisons, the results were assessed according to 0.05 significance level. The reliability of 18 statements created to measure the second screen usage status and motivation of the participants was tested on the SPSS program. When we did factor analysis, we found that the second dimension was 0.45 Cronbach α. We removed expressions with low communality values. The second dimension was still low. We have removed all expressions in the second dimension. Only two dimensions remain. There was no significant factorization in either dimension. That's why we canceled the factor analysis. We only took the Cronbach α value of the motivational expressions. Cronbach α value was determined as 0.913 for 18 statements. This value is above the accepted 0.60 and indicates high reliability.

Findings

Table 2 shows information about the demographic information of the participants. Being 58.2% of them female and 41.8% of them male, totally of 438 students participated in the research. 53.7% of the students are 18–22 years old, while 40.2% of them are 22–25 and 6.2% of them are 25 years old and above. As per their accommodation type detected, state dormitories had a share of 37.4% while those living with the family had a share of 25.3% and those living alone or with friends made a share of 25.3% while the rate of private dormitories was 9.8% and the relatives make 2% of the total pie. The participation level was detected as 14.8% from the Medicine Faculty, 14.2% from Faculty of Letters, 9.6% from the Education Faculty, 8% from Theology Faculty and Communication Sciences Faculty, 7.1% from the FEAS and Applied Sciences Faculty, 5.9% from Faculty of Sciences, 5.7% from Engineering Faculty, 3.7% from Architecture Faculty, 3.2% from Nursing Faculty and Health

Table 2. Frequency and percentage distribution of participants' responses to Demographic Variables.

Variables	Group	Frekans	Percentage
Gender	Female	255	58,2
	Male	183	41,8
Age	18–22	235	53,7
	22–25	176	40,2
	25+	27	6,2
Accomodation	Government dorm	164	37,4
	Private Dormitory	43	9,8
	At home by yourself or with friends	111	25,3
	with his family	111	25,3
	with relative	9	2
Faculty	Medicine	65	14,8
	Literature	62	14,2
	Education	42	9,6
	Theology	35	8
	Communication	35	8
	İİBF	31	7,1
	Applied Sciences	31	7,1
	Science	26	5,9
	engineering	25	5,7
	Fine Arts	17	3,9
	architecture	16	3,7
	Nursing	14	3,2
	Health Sciences	14	3,2
	Law	7	1,6
	Tourism	7	1,6
	Agriculture	5	1,1
	Basic Maritime	4	0,9
	Dentist	1	0,2
	Sports Sciences	1	0,2
Toplam		**438**	**100**

Table 3. Frequency and percentage distributions of responses by participants to the variables about TV.

Variables	Group	Frequency	Percentage
Do you have a TV where you live?	No	191	43.6
	Yes	247	56.4
Do you have a TV in your family's place?	No	7	1.6
	Yes	431	98.4
Do you watch TV?	No	180	41.1
	Yes	258	58.9
How much do you watch TV in a day?	0–1 hour	100	22.8
	1–2 hours	77	17.6
	2–3 hours	34	7.8
	3–4 hours	10	2.3
	4–5 hours	8	1.8
	5+ hours	71	16.2
	None	138	31.5
Total		**438**	**100**

Sciences Faculty, 1.6% from Law Faculty and Tourism Faculty, 1.1% from Agriculture Faculty, 0.9% from Basic Navigation Faculty and finally 0.2% from Dentistry Faculty and Sports Sciences.

Relevant to technology using habits

Frequency and percentage distributions of responses by participants to the variables about TV

It should be noted that although 41% of the Z generation participating in the research stated that they do not watch TV when their answers to Frequency of Using Second Screen While Watching Television (As per the Device) were examined, it was found that 90% of them used a second screen while watching TV with various tools (Table 3).

Frequency distribution of communication devices of participants

Frequency distribution related to the findings about communication devices of students is shown in Figure 1. As per these data, the most used device is smartphone (f = 434) and laptop (f = 336). The least used devices are desktops (f = 67) and smartwatches (f = 1), relatively. The tablet is a communication device preferred in a medium range (f = 90) (Figure 1).

Frequency distribution of communication devices used simultaneously by the participants

Accordingly, participants were asked to respond to which communication devices they use together. When the frequency distribution of the devices used simultaneously as per findings obtained is reviewed, it is detected that the students use PC and smartphone together at the utmost (f = 316), and then TV and smartphone, then TV and PC (f = 67), then TV + Smartphone and PC (f = 9), then only smartphone (f = 8) and finally PC + Tablet and smartphone (f = 2) (Figure 2).

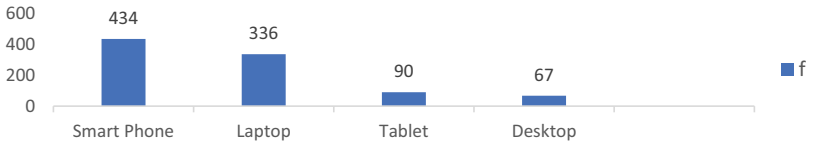


Figure 1. Frequency distribution of communication devices of participants.

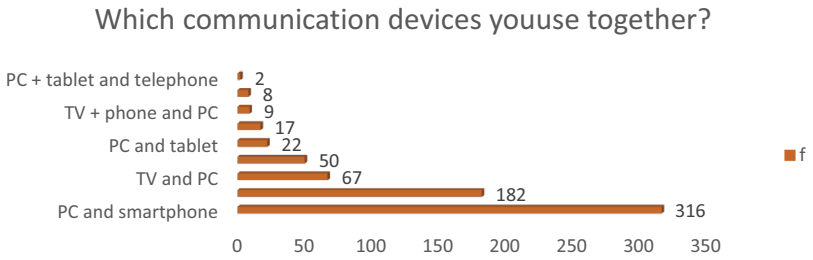


Figure 2. Frequency distribution of communication devices used simultaneously by the participants.

Frequency distribution of social media applications used by participants (f)

The most used social media application among students is detected to be Whatsapp (f = 414), which is followed by Instagram (f = 405). Other applications coming after have such frequency distributions relatively: Youtube (f = 397), Twitter (f = 285), Snapchat (f = 178), Facebook (f = 150), Messenger (f = 70), Tumblr (f = 15), other applications (f = 14), Scorp (f = 5), Swarm (f = 5) (Figure 3).

Frequency and percentage distributions of time spent on social media by participants (daily)

When the distribution of time spent on social media by students is reviewed, the rate of people saying 0–1 hour is 5.55%, 1–2 hours is 20.5%, 2–3 hours is19.2%, 3–4 hours is 17.6%, 4–5 hours is 10.7% and 5 hours and above is 26.5% (Figure 4).

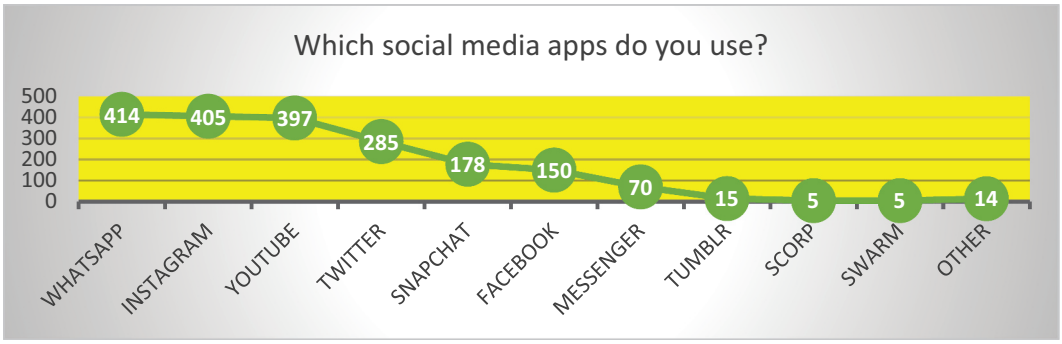


Figure 3. Frequency distribution of social media applications used by participants (f).

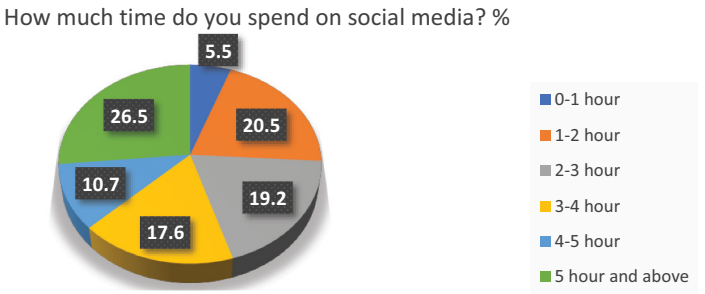


Figure 4. Frequency and percentage distributions of time spent on social media by participants (daily).

Second screen use states and motivations

Findings related to participants' information about second screen concept

The participants were defined second screen and asked if they had information about it or not. Accordingly, 50.7% of students stated that they knew the meaning before while 49.3% expressed that they had no information hereabout. According to Table 4, H1 does not seem to be supported. However, it is seen in Figure 2 that this is not the case (Table 4).

Frequency of using second screen while watching television (as per the device)

The participants were asked if they 'use second screen while watching TV' and the frequency and percentage values of responses are shown in Figure 5. As per these data, total f = 385 students were detected to use telephone as the second screen while watching TV. 67.5% of respondents were using second screen often while 24% of them used it rarely. Moreover, the smartphone is detected to be the only communication device accepted as 'the often-used device' with a rate of more than 50%. The second most used communication device employed by students is detected to be computer (f = 202 students in total) with an oft-used rate of 45% and rare-used rate of 16.4%. These statistics are followed by others with a rate of 4.1% (f = 121 total) and tablets with a rate of 3.1% (f = 257 total). The other option comes first among the second screen devices which are never preferred by the participants while watching TV with a rate of 86% and tablet, computers, and finally smartphone follows it with rates of 68.5%, 38.6%, and 8.6%, relatively (Figure 5).

Frequency of using second screen while watching TV as per participants' gender (according to device type)

Whether there is a significant relation between using second screen while watching TV and gender was researched and the findings are shown in Table 5. As per these data, a significant relation between smartphone use and gender has been found ($\chi 2 = 6.589$, $p < .05$). Hereunder, in the group where people use smartphones as the second screen 'often,' the rate of women is higher than men (62.7% vs. 37.3%) while in the group where people never use it as the second

Table 4. Findings related to participants' information about second screen concept.

Variables	Group	Frequency	Percentage
Do you know 'the second screen' concept means the explanation/definition above?	No	216	49.3
	Yes	222	50.7

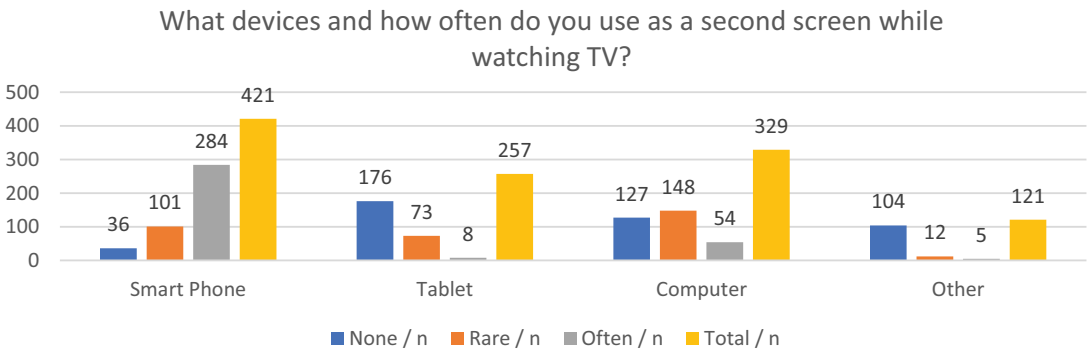


Figure 5. Frequency of using second screen while watching television (as per the device).

Table 5. Frequency of using second screen while watching TV as per participants' gender (according to device type).

Item	Variable	Group	Female n(%)	Male n(%)	Chi-square	*p*
(Frequency of using second screen while watching TV)	Smart phone	None	15(41.7)	21(58.3)	6.589	**0.037***
		Rare	56(55.4)	45(44.6)		
		Often	178(62.7)	106(37.3)		
	Tablet	None	97(55.1)	79(44.9)	2.01	0.366
		Rare	47(64.4)	26(35.6)		
		Often	4(50)	4(50)		
	Computer	None	71(55.9)	56(44.1)	1.249	0.535
		Rare	87(58.8)	61(41.2)		
		Often	27(50)	27(50)		
	Others	None	56(53.8)	48(46.2)	0,482	0.786
		Rare	7(58.3)	5(41.7)		
		Often	2(40)	3(60)		

Cronbach α = 0,913 > 0,60.

screen, there are more men (58.3%) than women (41.7%). When the rates of those who say they use often tablets and computers, women and men are found to have similar statistics (Table 5).

Second screen use frequency as per TV program being watched

It has been analyzed that individuals who watch television use their second screen devices simultaneously with which television program types and how often they are used. Accordingly, in terms of frequent use, 57.8% (n = 178) of the participants mostly use their second screen while watching music programs. And music programs are the only type of program that is above 50%. The second most preferred type is the series with a rate of 46.3%. As detected, the third most preferred program is the news with a rate of 35.4%. The approximate data belong to sports program. Namely, the participants were witnessed to watch sports programs as the fourth program during which 34.7% of the participants use their second screen devices. The sports program is followed by documentaries, talk shows, and others, being 26.7%, 26.7%, and 23.4%, relatively. The second screen device used by Gen Z while watching TV depends on program type (Figure 6).

Second screen use frequency as per TV program being watched (as per gender)

While tendency to watch TV varies from one region, age range, and personal taste from another depends on the audience's preference for the content the audience goes for some hedonistic taste and

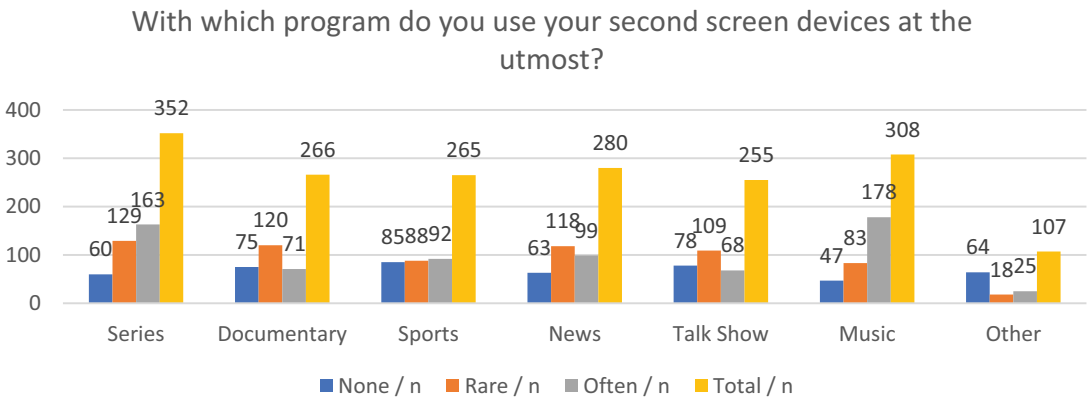


Figure 6. Second screen use frequency as per TV program being watched.

makes preference based on the pleasure he/she will get, according to the research. To ground on developing technologies, individuals have too many communication tools to watch. Moreover, there are many contents and applications for watching or using. Such an environment bears the hypothesis that 'the type and frequency of second screen use while watching TV may depend on the gender and TV content.' The second screen device used by Gen Z while watching TV depends on gender (Tablo 6).

The effect of using second screen while watching TV on attention deficit

Out of participant students, 24.9% of them expressed that they are not distracted when they use second screen, while 55.5% of them stated that they are a bit distracted. However, 19.6% of them said that they were distracted too much when they used second screen (Figure 7).

Findings related to the activity of audience using second screen while watching TV

The frequency and percentage distribution of students' views about the effect of using second screen on their activity were examined. According to the findings, 212 of the participants (50.1%) were indecisive, 120 of them (28.4%) said no while 91 of them (21.5%) said yes (Figure 8).

Percental findings related to the frequency of second screen apps use by participants

The participants were asked to tick the frequency of second screen use. If there is no application they use, they are asked to tick 'others' option. When viewed from this perspective, the frequency of

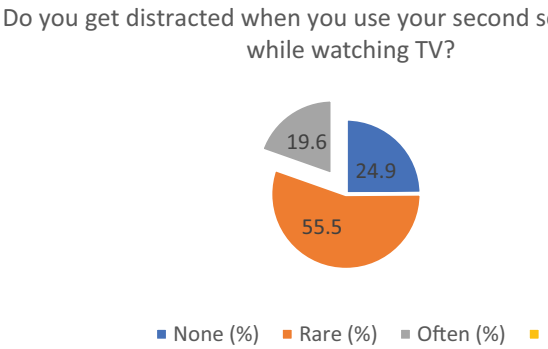


Figure 7. The effect of using second screen while watching TV on attention deficit.

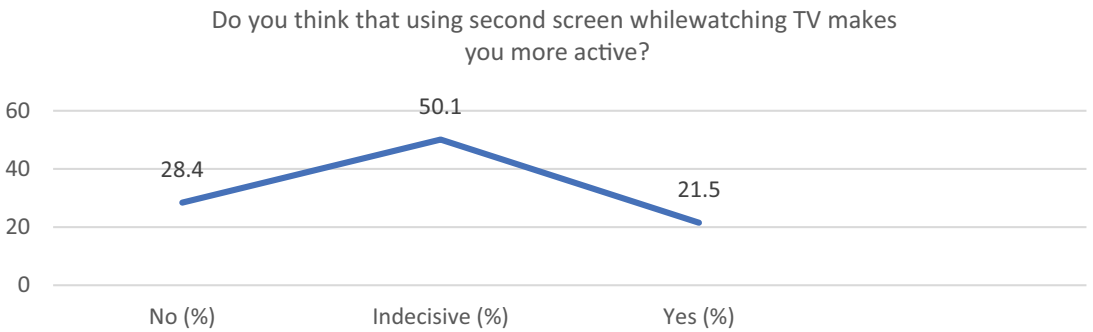


Figure 8. Findings related to the activity of audience using second screen while watching TV.

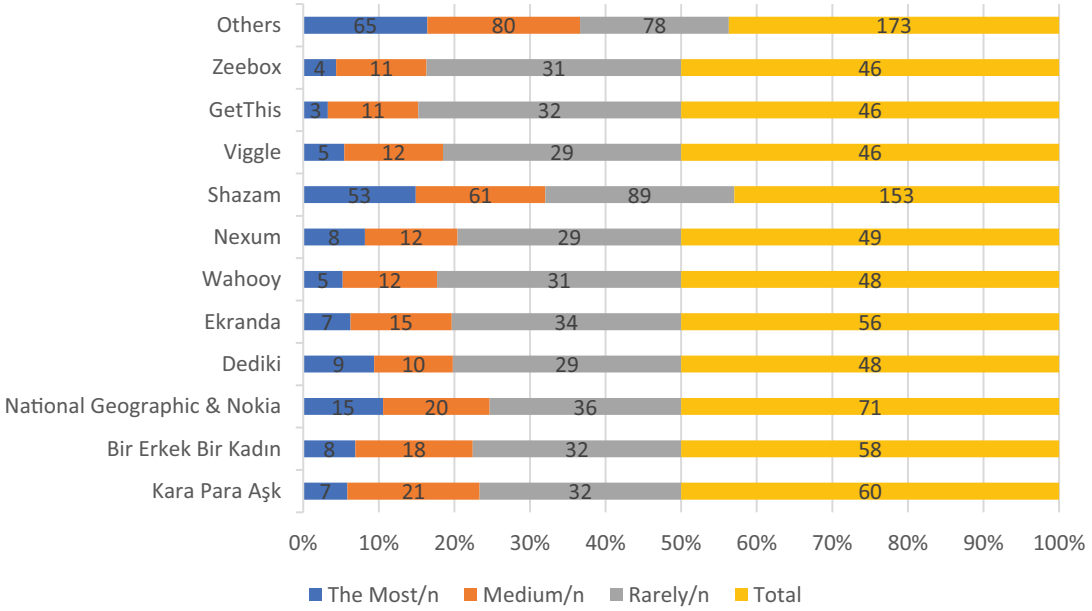


Figure 9. Percental findings related to the frequency of second screen apps use by participants.

applications used and unused and the distribution of their rates are shown in Figure 9. F = 173 of the students ticked 'others' option. This means that f = 173 of the f = 438 participants did not use second screen applications. When the findings were examined, Shazam was identified as the most used second screen application by total f = 153 students, being 34.6% at the utmost, 39.9% at the medium, and 25.5% at the minimum. Being used by totally f = 71 students, National Geographic & Nokia comes in second following Shazam with 21.2% at the utmost, 28.2% at the medium, and 50.7% at the minimum. Being used by totally f = 60 students, Kara Para Aşk application comes in third with 11.7% at the utmost, 35% at the medium, and 53.3% at the minimum. This is followed by Bir Erkek Bir Kadın ($n = 58$), Ekranda ($n = 56$), Nexum ($n = 49$), Dediki ($n = 48$), Wahooy ($n = 48$), Viggle ($n = 46$), Zeebox ($n = 46$) and GetThis ($n = 46$), relatively (Figure 9).

Motivations behind using second screen

Second screen users desire to be more actively involved individuals who decide what and when to watch using applications that generate social media (like digital platforms, social networks, etc.) and also watching traditional media (like TV) rather than being passive receivers of ready-made programs offered by only one medium. The users of second screen are increasingly turning their individualities into socialization via second screen devices. Within these data, Generation Z is probed about whether they play a more active, interactive, and involved role or not while using second screens (Table 6).

Motivations behind using second screen (based on gender)

Users may create friend groups and join the groups through these second devices and share ideas about programs seen on TV. Second screen use may make the experience of watching TV multi-dimensional and encouraging. On this axis, whether the motivation behind using second screen depends on the gender or not becomes a kind of research hypothesis.

Whether there is a difference between gender and motivation was examined via chi-square method (see Table 7). In this method, there are categorical variables that have two or more categories and the method aims to show whether there is difference between categoric variables rates and is not

Table 6. Motivations behind using second screen.

Motivational Items	Agree n(%)	Indecisive n(%)	Disagree n(%)
To share my questions and thoughts with others simultaneously	133(30,4)	166(37,9)	139(31,7)
To get new information about TV programs	131(29,9)	153(34,9)	154(35,2)
To get information about the programs I like	138(31,5)	146(33,3)	154(35,2)
To participate in the voting on TV series or programs I watch	250(57,1)	129(29,5)	59(13,5)
To convey my views or opinions to program producers	259(59,1)	131(29,9)	48(11)
To learn other people's opinions and thoughts about TV programs (series, sports, documentaries, news, etc.)	179(40,9)	155(35,4)	104(23,7)
Sharing my instant excitement about TV programs (series, sports, documentaries, news, etc.) with others	184(42)	148(33,8)	106(24,2)
To follow my social media accounts	126(28,8)	133(30,4)	179(40,9)
To read my e-mails	159(36,3)	173(39,5)	106(24,2)
To have fun	99(22,6)	143(32,6)	196(44,7)
To communicate/message with my friends	91(20,8)	116(26,5)	231(52,7)
To relieve my boredom	94(21,5)	145(33,1)	199(45,4)
To interact with others	98(22,4)	168(38,4)	172(39,3)
To learn other people's opinions and thoughts on any subject	148(33,8)	151(34,5)	139(31,7)
To share my opinions and thoughts on any subject with others	141(32,2)	167(38,1)	130(29,7)
To shop online or review products	114(26)	164(37,4)	160(36,5)
To do my work/homework	122(27,9)	171(39)	145(33,1)
To save time	141(32,2)	168(38,4)	129(29,5)

Note: 'I use my second screen devices (smartphone, tablet, computer etc.) while watching TV in order to . . . .'

parametric. Accordingly, a significant difference between the item 'I use second screen in order to follow my social media accounts' and gender has been detected ($\chi2 = 12.473$, $p < .05$). The rate of women that agree with this item is higher (68.2%) than that of men (31.8%).

And there is also another significant difference between the item "I use second screen in order to communicate with my friends/message them and gender ($\chi2 = 6.229$, $p < .05$). When the distribution of women responses to this item are examined, it can be seen that their rate of agreement is higher (63.2%) than that of men (36.8%).

There is a significant difference between the item 'I use second screen in order to shop online or look at the product' and gender ($\chi2 = 6.229$, $p < .05$), either. The rate of women's agreement on this item is higher (71.3%) than thaf of men (28.8%). The motivation behind using second screen differs from one gender to another. According to these data, H4 is supported (Table 7).

Conclusion & discource

Since Generation Z grew up in the digital and social media age, when examined within the framework of this theory, it is seen that their media consumption behaviors are very different from traditional media. Especially in this period, when interactive and personalized content is at the forefront, the media use of Generation Z is shaped as a means to meet its social needs in accordance with the predecessors of the theory. This study is based on the satisfactions of Generation Z while watching television with their second screen. From this point of view, in this study, we investigated the second screen usage motivations of the Z generation, who are university students, as well as which devices they use as a second screen the most, with which TV program types they use these devices and whether it differs according to gender. In addition, we have added a new discussion to the use of the second screen by investigating which first and second screens Generation Z prefers to use at the same time.

The findings obtained have shown that Generation Z is active, selective and purposeful in media use, and how the Uses and Gratifications approach provides a framework for understanding these behaviors. The second screen usage habits of Generation Z can be evaluated as meeting various needs within the framework of the Uses and Gratifications approach. These motivations reveal the active participation of Generation Z in media consumption and the search to meet their various needs. Based on this, the findings we obtained, the hypotheses we created and the validity of our questions are discussed as follows.

Table 7. Motivations behind using second screen (based on gender).

Motivational Articles	Group	Female n(%)	Male n(%)	Chi-square	p
To share my questions and thoughts with others simultaneously	Disagree	77(57,9)	56(42,1)	1,886	0,389
	Indecisive	91(54,8)	75(45,2)		
	Agree	87(62,6)	52(37,4)		
To get new information about TV programs	Disagree	75(57,3)	56(42,7)	1,259	0,533
	Indecisive	85(55,6)	68(44,4)		
	Agree	95(61,7)	59(38,3)		
To get information about the programs I like	Disagree	76(55,1)	62(44,9)	4,431	0,109
	Indecisive	79(54,1)	67(45,9)		
	Agree	100(64,9)	54(35,1)		
To participate in the voting on TV series or programs I watch	Disagree	151(60,4)	99(39,6)	1,18	0,554
	Indecisive	72(55,8)	57(44,2)		
	Agree	32(54,2)	27(45,8)		
To convey my views or opinions to program producers	Disagree	161(62,2)	98(37,8)	4,427	0,109
	Indecisive	67(51,1)	64(48,9)		
	Agree	27(56,3)	21(43,8)		
To learn other people's opinions and thoughts about TV programs (series, sports, documentaries, news, etc.)	Disagree	111(62)	68(38)	2,456	0,293
	Indecisive	83(53,5)	72(46,5)		
	Agree	61(58,7)	43(41,3)		
Sharing my instant excitement about TV programs (series, sports, documentaries, news, etc.) with others	Disagree	111(60,3)	73(39,7)	0,821	0,663
	Indecisive	82(55,4)	66(44,6)		
	Agree	62(58,5)	44(41,5)		
To follow my social media accounts	Disagree	63(50)	63(50)	12,473	**0,002***
	Indecisive	70(52,6)	63(47,4)		
	Agree	122(68,2)	57(31,8)		
To read my e-mails	Disagree	90(56,6)	69(43,4)	1,431	0,489
	Indecisive	98(56,6)	75(43,4)		
	Agree	67(63,2)	39(36,8)		
To have fun	Disagree	57(57,6)	42(42,4)	4,53	0,104
	Indecisive	74(51,7)	69(48,3)		
	Agree	124(63,3)	72(36,7)		
To communicate/message with my friends	Disagree	44(48,4)	47(51,6)	6,229	**0,044***
	Indecisive	65(56)	51(44)		
	Agree	146(63,2)	85(36,8)		
To relieve my boredom	Disagree	49(52,1)	45(47,9)	5,648	0,059
	Indecisive	78(53,8)	67(46,2)		
	Agree	128(64,3)	71(35,7)		
To interact with others	Disagree	51(52)	47(48)	4,218	0,121
	Indecisive	94(56)	74(44)		
	Agree	110(64)	62(36)		
To learn other people's opinions and thoughts on any subject	Disagree	85(57,4)	63(42,6)	0,188	0,91
	Indecisive	87(57,6)	64(42,4)		
	Agree	83(59,7)	56(40,3)		
To share my opinions and thoughts on any subject with others	Disagree	78(55,3)	63(44,7)	1,078	0,583
	Indecisive	97(58,1)	70(41,9)		
	Agree	80(61,5)	50(38,5)		
To shop online or review products	Disagree	54(47,4)	60(52,6)	18,49	**,000***
	Indecisive	87(53)	77(47)		
	Agree	114(71,3)	46(28,8)		
To do my work/homework	Disagree	67(54,9)	55(45,1)	3,134	0,209
	Indecisive	95(55,6)	76(44,4)		
	Agree	93(64,1)	52(35,9)		
To save time	Disagree	84(59,6)	57(40,4)	0,187	0,911
	Indecisive	96(57,1)	72(42,9)		
	Agree	75(58,1)	54(41,9)		

Cronbach $\alpha = 0{,}913 > 0{,}60$.

Note: 'I use my second screen devices (smartphone, tablet, computer etc.) while watching TV in order to . . . .'

H1: The majority of the TV audience Generation Z does not depend on only one screen/RQ1: What are the devices most used by them as the second screen? In such an environment, smartphones that have appeared as second screens play an important role among technological devices, which provide additional information (Shin et al., 2016). The results indicate that the vast majority of TV audience generation Z uses second screen, yet very few of them is aware of this fact. They use smartphones as the second screen at the utmost. It has been established that women use their smartphones more than men. There is a positive correlation between the devices used as second screen and devices owned by these individuals. People do not only interact with a screen to learn but also use an additional screen to search for information. The majority of TV audience Generation Z does not depend on only one screen. According to the data shown in Figure 5, RQ1 and H1 are supported. There are many reasons behind supporting Hypothesis 1, such as technology, young people's trend, and accessibility. In other words; Generation Z is equipped with various riches of technology since they were born directly into the era of mobile phones, laptops, wide Internet and web networks, and eventually new media. Even though they are acquainted with traditional media and use it, they do not act only to watch TV. They use their second screen as a supportive element for TV. After all, the fact that Generation Z mostly uses their smartphones as a second screen and frequently browses social media while watching television also means that they are multitasking. This meets the need to increase entertainment and prevent boredom

H2: Generation Z becomes more active, interactive, and involved when they use second screen. 90% of individuals living in Turkey use second screens. Prefers to use the second screen most for accessing additional information and interacting with others (Gil de Zúñiga & Liu, 2017). When the motivations for using the second screen in Table 8 are examined, it is seen that some of the participants of the z generation are active, participatory, and interactive. In addition, according to Figure 8, in which we asked the participants using the second screen whether they saw their cats actively or not; 212 of the participants (50.1%) were indecisive, 120 of them (28.4%) said no while 91 of them (21.5%) said yes. From this point of view, it is seen that our findings partially support H2. According to the findings here, although it seems that the hypothesis partially works, when the distribution of the participants' answers to the motivation items is examined, it is seen that the rates are exactly opposite to the 'undecided' and 'no' answers they gave here. So, when Table 8 is examined, it has already been determined that more than 90% of the participants are active and interactive with their second screens. It is thought that the participants here are not aware of themselves and the situation they are in. In other words, they can use the second screen to chat with their friends, search for information about the content they watch, read e-mails, etc. It is thought that they are unaware that such actions they perform make them active and interactive

RQ2: With Which types of television programs (series, documentaries, sports, music, etc.) do they use second screen devices most simultaneously? Barkai and On (2018) express that 'news is central to second screen use since it does not require a long span of attention to follow and has short-term components.' Although Barkai and On (2022) found that young people's news consumption behavior is on their smartphones as a second screen, however, according to our research data, Generation Z uses second screen devices most frequently while watching music programs. In addition, the types of TV programs that they prefer to use on their second screens also vary (for detailed information, see Figure 6).

RQ3: Does Generation Z use the second screen about the content being watched at that moment? Wu and Kim (2021) categorize the behavior of using second screen into two as 'surfing on Web for the content being watched' and 'surfing on Web independent of what is being watched.' According to our findings, very few Generation Z members were seen to use their second screens to participate in voting process. The vast majority of them use their second screens to collect information through interacting

Table 8. Second screen use frequency as per TV program being watched (as per gender).

Item	Variable	Group	Woman *n*(%)	Male *n*(%)	Chi-square	*p*
With which program do you use your second screen devices at the utmost?	Series	None	29(48,3)	31(51,7)	13,597	**0,001***
		Little	70(54,3)	59(45,7)		
		Chic	116(71,2)	47(28,8)		
	Documentary	None	43(57,3)	32(42,7)	0,088	0,957
		Little	67(55,8)	53(44,2)		
		Chic	39(54,9)	32(45,1)		
	Sport	None	58(68,2)	27(31,8)	18,291	**,000***
		Little	40(45,5)	48(54,5)		
		Chic	34(37)	58(63)		
	News	None	35(55,6)	28(44,4)	0,754	0,686
		Little	65(55,1)	53(44,9)		
		Chic	60(60,6)	39(39,4)		
	Talk Show	None	45(57,7)	33(42,3)	11,237	**0,004***
		Little	56(51,4)	53(48,6)		
		Chic	52(76,5)	16(23,5)		
	Müsic	None	26(55,3)	21(44,7)	3,392	0,183
		Little	46(55,4)	37(44,6)		
		Chic	117(65,7)	61(34,3)		
	other	None	33(51,6)	31(48,4)	8,242	**0,016**
		Little	5(27,8)	13(72,2)		
		Chic	18(72)	7(28)		

Cronbach α = 0,913 > 0,60.

with other audiences. While they sometimes use their second screens related to the program, they generally employ them during activities apart from watching TV (for detailed information, see Table 8). Generation Z responds to the needs of using the internet to learn more about the content they are watching, gaining knowledge and deepening meaning. Therefore, more information about this goes into the research effort.

H3: The second screen device used by Generation Z while watching TV depends on gender and program type. Compared to men, women use their second screens mostly while watching TV series, talk shows, and other types of programs. Men use their second screens mostly when watching sports-type programs compared to women. While the tendency to watch TV varies from one region, age range, and personal taste from another depends on the audience's preference for the content the audience goes for some hedonistic taste and makes preference based on the pleasure he/she will get, according to the research. To ground on developing technologies, individuals have too many communication tools to watch. Moreover, there are many contents and applications for watching or using. Such an environment bears the hypothesis that 'the type and frequency of second screen use while watching TV may depend on the gender and TV content.' The second screen device used by Generation Z while watching TV depends on gender. When Tables 5 and 8 are examined, it is seen that the devices used as the second screen and the type of TV program watched differ according to gender. According to these data, it was determined that H3 worked to a large extent while RQ4 was answered.

RQ4: Do the motivations behind using second screen depend on gender? = H4: The motivation behind using second screen differs from one gender to another. Previous studies have shown a positive correlation between using second screens and social networks (Shim et al., 2017). While social network sites are a common reason for using a second screen (Altintaş & Bilgili, 2023; Stauff, 2016), the ways in which they are used are diverse (Guo, 2020). In addition, Kucur (2022) study found that Generation Z, television viewers in Turkey, mostly use their second screens to conduct research on the content they watch. Our findings indicate that Generation Z uses their second screens mostly for communicating with friends and messaging. 'While watching TV, commenting on the program on social media or

chatting with friends meets the need for social connection and interaction.' The second most common reason for using social media applications is for leisure activities. In comparison to men, women predominantly use their second screens for online shopping, following social media accounts, and communicating with friends and messaging. When Table 6 created for Hypothesis 4 was examined, it was determined that Hypothesis 4 was partially consistent. Because of both gender groups using second screens, there was only a difference in women and in very few motivational items. More than just the inconsistency of this hypothesis, it also created an unexpected situation. Because there is no motivation item in which men show a significant difference from women. When creating the hypothesis, it was expected that there would be mutually distinct headlights in both genders. The reason for this situation can be understood by looking at Tables 4 and 5. When Table 5 is examined, it is seen that the gender that uses second screens the most is women. In addition, when Table 8 is examined, it is determined that women are the gender that uses their second screens the most compared to men, with all TV program types showing a significant difference, except for sports programs. When the rates of using social media applications of participants (Figure 3) are examined, it can be seen that this is an expected result. Also, when television viewers use the second screen, they tend to use more social media applications (Barnidge et al., 2017). Following this, Generation Z uses their second screens to have fun time and end their boredom.

Based on Chadwıck (2013) observations, the practice of second screen use represents the intersection of traditional and new media, creating a hybrid media system. This system involves the interaction between older and newer media technologies. However, our findings suggest that Generation Z prefers to use their computer and smartphone together as their first and second screens, more so than any other device pair (as shown in Figure 2). This may indicate that the technology usage habits of Generation Z are shifting from traditional and new media technologies to newer media technologies. As a matter of fact, changes in viewers' media consumption habits show that social media is a powerful platform that can replace traditional television (Hernández et al., 2023).

The theoretical contributions

In this study, we made some theoretical contributions and managerial implications. Previous research has mostly focused on the link between smartphone and television use (Su & Chen, 2020). However, we took it a step further by exploring which communication devices people use as a second screen while watching television, apart from their phone. Furthermore, prior studies only concentrated on one genre of program, such as commercials or news, watched with a second screen (Cunningham & Eastin, 2017; Horning, 2017; Rubenking & Lewis, 2016). In contrast, we examined the general TV program genre that the z generation, as the primary television audience, uses the most with their second screens. Additionally, previous studies explored using another screen while watching television in general (Chadwıck, 2013). However, we took a new perspective. We investigated what other screens the generation z use at the same time as their first and second screens, apart from television. As a result, we found that computers and smartphones are the two most commonly used devices alongside television. Finally, previous studies have conveyed the use of multiple screens through a combination of television and social media (Shim et al., 2015). However, we looked into the combination of television and second screen applications, as well as the combination of social media.

Practical implications

In terms of practical and design implications, we found that very few television audience use second screen applications. Therefore, it will be beneficial for second-screen application and advertisement developers to consider this data while producing content. Generation Z uses

their second screens mostly while watching music (entertainment) and sports programs on television. And she/he mostly uses her smartphone. In television and smartphone design, the connection strength between the two can be varied to enhance the viewer's experience. Women mostly use their second screen for shopping while watching TV. Advertising producers can increase their simultaneous work with TV producers in this direction. Finally, Generation Z mostly uses their second screen in social media applications independent of the content they watch. TV producers can produce content that the audience can participate in so that they can attract the attention of the audience to the television. In addition, by increasing the interaction of the triangle of television, social media, and smartphone, the audience can be provided with an environment where they can participate more.

Limitations and future directions

This research does not explore the psychological and sociological factors that drive the use of second screens. It also doesn't identify the situations where people use TV as the first screen and the second screen. Moreover, it is unclear which device, between computers and smartphones, is used as the first or the second screen. However, future studies could investigate the usage of second screens among university students receiving distance education. Additionally, future studies can investigate the usage habits of second screens in second language learning. These limitations are simply suggestions for further research.

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