

Social Media Withdrawal: What Social Media Services and Activities Teenagers miss when they are “switched-off”?

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Abstract: Nowadays teenagers grow up with social media and various possibilities of digital communication. The offline and online lives of “digital natives” are tightly bound together and for most of them life without Internet is unthinkable. However, what happens when teenagers do not have access to modern communication facilities and to social media? Do they miss these media? What services and which activities do teenagers miss? We gathered qualitative data from teenagers after three weeks of being completely offline in frames of a long-term adventure education program. We also gathered quantitative data on teenage media use before media withdrawal. 135 teenagers ($M=14.47$, $SD=.56$, 52% female) answered our questions within four years (34 teenagers in each of these years - 2018, 2019, 2020 - and 33 teenagers in 2021). After three weeks of complete media withdrawal two thirds of teenagers reported not missing social media or missing them to a minor extent. They described social media services as stressful, disturbing, extremely time-consuming and boredom-related. Several respondents replied that they had enough communication offline and felt good in the community that made online social media superfluous. However, every third teenager reported missing social media. The main reason was the desire to contact the personal social network. A few teenagers reported missing social media as a source of relaxation and an efficient way to “switch-off”. One out of four teenagers (23%) reported missing WhatsApp. One out of ten (11%) mentioned Instagram, but just one half in a context of missing it. WhatsApp and Instagram were also the most popular services among teenagers before withdrawal (94.3% of teenagers reported having a profile in WhatsApp and 73,3% of teenagers reported using Instagram). Only a few teenagers (2.2%) - all boys - mentioned missing YouTube. The article presents further results, discusses perspectives and limitations of the project.

Keywords: Social Media Use Among Teenagers, Media Withdrawal, Whatsapp, Instagram, Youtube, Media-Related Stress, Boredom, Gender Differences In Social Media Use

1. Introduction

Now teenagers grow up with social media and various possibilities of digital communication. For representatives of the Generation Z - also named the iGeneration, the net generation, the Google generation, Homelanders or post-Millennials - the offline and online lives are tightly bound together and for most of them life without Internet and social media is unthinkable. “Social media, constant connectivity and on-demand entertainment and communication are innovations Millennials adapted to <..>. For those born after 1996, these are largely assumed” (Dimock 2019). “Digital natives” are socialized in a way that is vastly different from their parents and there are assumptions going so far to state that “Digital Natives brains are likely to be physically different as a result of the digital input they received when growing up” (Prensky 2001).

Michael Dimock from the Pew Research Centre states: “The implications of growing up in “always on” technological environment are only now coming into focus <..> Beginning to track this new generation over time will be of significant importance” (Dimock 2019). Our research is focusing on the Generation Z and aims at answering the questions: what happens when teenagers do not have an access to modern communication facilities and to social media they are used to? What services and which activities do teenagers miss when they are “switched-off”?

Up to now the reaction of users on social media abstinence has received some attention as the potential clinical intervention in case of social media addictive behaviours (Fernandez et al. 2020; Zhou et al. 2021). Internet addiction and social media overuse are hot topics, with studies scrutinizing conceptualisation, prevalence and associated factors of the phenomenon (for systematic reviews see e.g. Kuss et al. 2014 and Talis, 2022; for meta-analysis of gender-related differences see Su et al., 2020). However, treatment of this widespread and problematic phenomenon is still in its infancy stage (Gioia & Boursier, 2019; Zajac et al, 2017). Media withdrawal could potentially be used for tackling social media overuse and Internet addiction; however, its potential is still to be clarified.

Up to now studies looked at short-term abstinence interventions from several 2.5-hour breaks (Zhou et al. 2021) to one week (Stieger & Lewetz 2018). Stieger and colleagues (2018) designed an ecological momentary intervention study using smartphones where 152 participants were instructed not to use media for 7 days. A substantial number of participants (59 percent) relapsed at least once during the intervention. The researchers

concluded in their study: “Communicating through online social media is evidently such an integral part of everyday life that being without it leads to withdrawal symptoms (craving, boredom), relapses, and social pressure to get back on social media”. Hoffner and colleagues (2016) analysed the recalled responses of 272 smartphone users to loss/separation from their mobile phones (not by choice) and their use of the mobile phones for self-expansion. Most respondents reported negative feelings, such as loneliness/disconnection, anxiety, and boredom when without their mobile phones, whereas some felt relieved to be out of touch with others. Our aim in this study is to assess the reactions of teenagers after a much longer media withdrawal – three weeks without possibility to relapse.

In Germany, media use among teenagers is very high. According to “EU Kids Online 2020: Survey results from 19 countries” (Smahel et al. 2020), in Germany more than 85% of children aged 9-16 use a smartphone to access the Internet at least once a day, 46% use desktop computer, laptop or notebook, and 16% use tablet to go online daily (p. 19). 50% of 12-14-year-old teenagers and 75% of 15-16-year-old teenagers reported visiting a social network site as a daily online activity (p.30). The representative German study (Feierabend et al. 2022) reports similar numbers: 92% of teenagers between 12- to 19-years of age use smartphones daily, 84% are online in their free time every day (p.16).

It is difficult to “switch-off” modern teenagers and disconnect them from media they are used to in a normal environment as a part of an everyday routine. Thus, we focus on a rather extraordinary group that decided to take part in the adventure education programme “Classroom under Sails”. This program allows teenagers to sail around the globe for half a year and take part in different cutting-edge experiences (climbing, biking, living with indigenous groups). At the same time teenagers get normal school classes according to the schedule for the 10th grade of gymnasium (the German equivalent of a grammar school). During the whole trip, teenagers have very limited access to modern communication facilities and social media. The use of mobile telephones is only allowed during some land stops and for a strictly limited period of time; thus, teenagers have an almost complete break from the online world for half a year.

2. Methods

2.1 Sample

Each year 34 teenagers take part in the “Classroom under Sails” programme. All participants are volunteers. As there are normally three to four times more teenagers willing to take part in the program than places on board, teenagers go through a preselection process conducted by the organizational committee of the trip. The selection criteria are general motivation, fitness and an acceptable academic level. We had an opportunity to gather data from both selected and unselected teenagers and we have not found any significant differences in social media usage between these groups.

During this study, we gathered data from participants of four subsequent trips (each trip lasted from October until April): 2018-2019, 2019-2020, 2020-2021, 2021-2022. Every group had 34 participants from the beginning till the end of the journey, with the exception of the trip 2021/2022 where one participant had to quit, due to health problems. Thus, our sample has 135 teenagers between 14 and 16 years of age ($M=14.47$, $SD=.56$; 52% female). The majority of participants came from different regions of Germany, but there were also several German-speaking teenagers from Austria, Liechtenstein and the UK on board (3%).

We accompanied each group over the span of one and a half years (half a year before the trip, during the trip, and half a year after finishing). For this study we use data that we gathered just before the sailing trip and after the first three weeks of it. During this time teenagers experienced a complete media withdrawal.

2.2 Instruments

We used several instruments to capture teenagers’ usage of the social media in different time periods, including standardised questionnaires and open questions.

For this study we asked teenagers whether they used the following services: YouTube, Instagram, WhatsApp, Facebook, Twitter, and Snapchat. Teenagers could choose from four answers: “I have no profile here”, “I have a mostly inactive profile here”, “I have a profile and use it from time to time”, and “I have profile here and use it regularly”. The choice of social networks for this question was made taking into consideration the overall evidence of teenage use of social media in Germany at the beginning of the study (Feierabend et al., 2018, p.37-38).

During the trip teenagers answered the following open questions: “Do you miss social media (social networking sites, such as e.g. Facebook, or instant messaging services, such as e.g. WhatsApp)? What do you miss and why?”.

2.3 Procedure

We gathered data before the trip via the online data gathering web-application tool SoSci Survey. During the trip data were gathered with the help of paper-based questionnaires. All data were digitalized and analysed using the IBM SPSS Statistic Software (Version 29) and MAXQDA software. The collected data had no missing values: all teenagers gave answers to our questions. Data on use of social media profiles were not collected in the first year of our study - the trip of 2018-2019.

3. Results

3.1 Teenagers use of social media before the media withdrawal

We asked teenagers how often they use several popular social media services before the trip. The results are presented in Table 1.

WhatsApp service is the most intensively used platform according to teenagers’ self-evaluation. Only 5.9% of teenagers reported that they have no WhatsApp profiles. Teenagers who have a profile in this service, use it regularly (81.2% of teenagers: 90.4% of girls and 71.4% of boys). Almost four out of five girls and two out of three boys have an *Instagram* profile (73.3% of teenagers: 78.8% of girls and 67.3% of boys). 40.6% of teenagers (46.2% of girls and 34.7% of boys) use their Instagram profiles regularly. *YouTube* is also a popular platform among teenagers, with boys using it significantly more often than girls: 61.5% of girls and 85.7% of boys reported having an account here, with 21% of girls and 55% of boys having stated to use it regularly. *Snapchat* is used less often than services mentioned above; with girls being significantly more frequent users of the platform than boys: 51.9% of girls and 34.7% of boys reported having a profile here, 26.9% of girls and 12.2% of boys reported using their profiles regularly. At the same time, Twitter and Facebook are used only by 12.9% and 6.9% of teenagers respectively (no significant gender differences).

Table 1. Teenagers’ use of social media before media withdrawal

Social Media	no profile	mostly inactive profile	use profile from time to time	use profile regularly
WhatsApp	5.9%	0%	12.9%	81.2%
Instagram	26.7%	12.9%	19.8%	40.6%
YouTube*	26.7%	16.8%	18.8%	37.6%
Snapchat**	56.4%	8.9%	14.9%	19.8%
Twitter	87.1%	8.9%	4.0%	0%
Facebook	93.1%	6.9%	0%	0%

*Boys use this service significantly more than girls ($d=.83$, $p\leq.01$)

**Girls use this service significantly more than boys ($d=.43$, $p\leq.05$)

3.2 What teenagers miss after three weeks of complete media withdrawal

After three weeks of complete media withdrawal, we asked whether teenagers missed social media, which services they missed and why. All teenagers answered our questions, with answers being between one word (0.7%) and 110 words in length. The main responses to the question “Do you miss social media?” are presented in Figure 1.

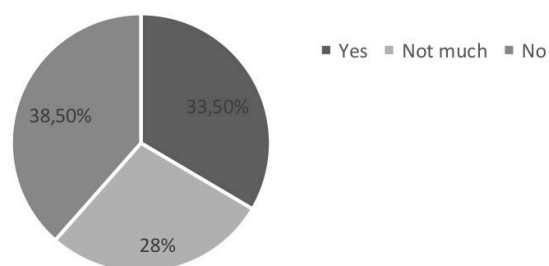


Figure 1. Teenagers responses to the question “Do you miss social media?”

Two thirds of teenagers reported that they do not miss social media or do not miss them much. Teenagers explained that with the following reasons:

- Social media are *stressful*: “I do not miss social networks much because I associate them with appointments and stress”; “it is much easier, when you do not need to know everything”; “I often feel overstrained by so many messages and have no desire then to answer all of them”, “the messaging services give me a feeling of speeding up time”, “I do not miss them because it is much more relaxed without them”, “The main reason why I do not miss anything is that now I am not under the pressure of these services”.
- Social media are *disturbing*: “I am not disturbed because of waiting for messages”, “here <on the ship> I do not need to take an effort to put away my mobile, because I just do not have one”.
- Social media are *a waste of time*: “without social media one has more time”, “I absolutely do not miss them since I already thought that I wasted too much time online”.
- Social media are *unnecessary when teenagers have enough contact with other people*: “I do not miss <social media>, because it is always possible to find friends somewhere on the ship. One has enough contact with other people here”; “I do not miss them much, as I feel good in the community”.
- Social media are only needed *to kill boredom*: “At home I am often alone and have nothing better to do, but here it is different”, “After all I was often on my mobile, when I was bored. Now I have better things to do and I like it”, “Here <on the ship> one has many other things to do and can live without <social media>”.

After three weeks offline every third teenager answered that he/she missed social media. The majority gave easy and fast communication with friends and family as the main reason: “What I think is especially good about social media is that it provides possibility to have a contact everywhere in the world <..> it is a great way to pass on messages”; “I miss the freedom to contact people whom I care about at any time”. One boy specified that he misses his online community.

Three teenagers mentioned explicitly missing news and news services “what happens and where is interesting to me”. One girl specified that she misses unrestricted contact to the world, not the media per se: “I miss less the services, but more the unrestricted contact to the outside world, not only family and friends, but also what happens in the World and on the Internet”.

Two teenagers explicitly mentioned missing entertainment, one girl wrote “Sometimes I miss social media, for instance in the evenings for entertainment/distraction and to kill boredom, I do not miss the permanent accessibility”.

One out of three teenagers referred to particular social media services in their answers. Table 2 shows how many teenagers mentioned which social media services.

Table 2. Services that teenagers mentioned in their answers after three weeks of media withdrawal

“Which social media services do you miss?”	Respondents
WhatsApp	23%
Instagram	11%
YouTube	2.2%
TikTok	2.2%
Snapchat	1.5%
Discord	1.5%
Signal	1.5%
iMessage	0.7%

3.2.1 WhatsApp

A total of 23% of teenagers – every fifth boy (20%) and every fourth girl (25.7%) - mentioned this service in their answers. One girl mentioned missing WhatsApp “to write with friends without too high costs. And to send pictures.” “<I miss only> WhatsApp to write with friends and family. The rest of my apps was just for pastime and here <on the ship> it is never boring for me”. Some teenagers who reported not missing social media still mentioned that it would be a pleasure to send messages or to chat in WhatsApp: “I miss WhatsApp because it was the possibility at very late or at very early hours to communicate with friends”. Only two teenagers mentioned WhatsApp in a negative context and reported that they do not miss it. One boy wrote: “I do not miss

WhatsApp because I get relatively many messages that do not concern me, and it means just work to read them and that's really annoying".

3.2.2 Instagram

One out of ten teenagers referred to Instagram. Half of the respondents mentioning Instagram in their answers reported missing it: "I miss Instagram as I can see there what my friends do", "I sometimes miss Instagram as I can scroll through the photos there to see what happens with my friends". At the same time, the other half of teenagers mentioned Instagram in a negative context: "I do not miss social networks, because I use Instagram at home just as a pastime"; "I do not really miss Instagram. I want to live in the moment <..> instead of looking at what my friends are doing at home"; "I do not miss <social networks>, because time here is so much better than to look at day stories of others, whom you do not really know. I spent too much time at home on Instagram." All teenagers mentioning Instagram in their answers were female, except for two boys (one reported missing it, whereas the other one stated being happy without it).

3.2.3 Other services

2.2% of teenagers mentioned missing YouTube in their answers, all of them - boys. One boy specified that he had especially missed YouTube at the beginning of the trip, while another boy specified that he missed YouTube only when he had nobody to spend time with. The same percentage of teenagers - 2.2% - referred to TikTok. All respondents mentioning TikTok in their answers were girls from the last trip (2021-2022). Whereas two girls reported missing it ("I sometimes miss laying in my bed and watching TikToks"), one mentioned it in a negative context: "I do not miss much such Apps as Instagram or TikTok because they are only for a pastime and when I think about it: they have no actual utility". Just a few teenagers mentioned Snapchat (one boy and one girl), Signal (two girls), Discord (one boy and one girl) and iMessage (one boy). These services were mentioned in the context of missing communication and exchange with friends through messages and pictures.

4. Discussion

Before media withdrawal the social media use of teenagers in our sample is largely consistent with results of the representative German-wide studies conducted by the Media Education Research Association Southwest (MPFS) (Feierabend et al. 2018, 2021, 2022). MPFS collects key figures on media use among 12- to 19-year-old teenagers in Germany every year and publishes them in so called annual JIM-study ("Jugend, Information, Medien"/"Youth, Information, Media"). According to the latest study, WhatsApp is the most important service for communication among teenagers: 93% use it regularly, 85% even on a daily basis (Feierabend et al. 2022, p.29). In our sample 94.3% of teenagers have a profile in WhatsApp and 81.2% reported using their profiles regularly. The second place - both in our sample and in the JIM-studies- is taken by Instagram. The latest JIM study reports that 62% of teenagers use it regularly (p.39). In our sample 73.3% - almost three out of four teenagers - reported using this service (78.8% of girls and 67.3% of boys). According to the JIM-study, Snapchat is used by 45% of teenagers, whereas in our sample 43.6% of teenagers have a profile in this service (51.9% of girls and 34.7% of boys). Thus, the popularity of the main social media – WhatsApp, Instagram and Snapchat - are almost the same among teenagers in our study and in the German representative sample.

The use of Twitter and Facebook appeared to be rather unpopular among teenagers in our study: only 12.9% and 6.9% of teenagers respectively have mostly inactive profiles or profiles that they use from time to time here. The JIM-study reports slightly higher popularity of these services among teenagers (28% and 11% respectively) (Feierabend et al. 2022, p.29). In general, such low popularity of these two services goes in line with other studies confirming the shift in the use of social networking sites in Europe in the last decade, with children migrating from Facebook to such platforms as Instagram and to instant messaging services like WhatsApp (Smahel et al. 2020, p.28).

Besides the services, described above, the JIM-study reports that teenagers use the following services in Germany in 2022: Discord (16%), Pinterest (13%), Facetime (12%) and Twitch (11%). The JIM-study has also revealed that the popularity of TikTok is rapidly growing among teenagers in the last years, with already 54% of teenagers using this service in 2022 (Feierabend et al. 2022, p.29). In our study we have not collected data on these services (at the beginning of our study in 2018 TikTok just became available worldwide after merging with Musical.ly). But these services will be considered in our further research.

Our study has confirmed gender differences in the use of social media services popular among teenagers that were reported in the JIM-studies. Girls are more active users of both Instagram and Snapchat. In the JIM-study

70% of girls and 54% of boys were found to use Instagram (Feierabend et al. 2018, p.29), whereas in our study 78.8% of girls and 67.3% of boys reported having a profile here. The JIM-study reports that 52% of girls and 38% of boys use Snapchat in Germany (2018, p. 29), in our sample 52% of girls and 35% of boys stated having a profile here. Thus, both the popularity level of Instagram and Snapchat among teenagers and the gender differences in use of these two services are almost the same in our sample and in the JIM-studies.

The use of YouTube - a huge repository of video content and a social networking platform – also depends on gender. In our sample boys used YouTube significantly more often than girls ($d=.83$, $p\leq .01$): they are more likely to have an account here and use their accounts more regularly than girls (85.7% of boys vs. 61.5% of girls and 55% of boys vs. 21% of girls respectively). The similar frequency of use and gender differences were also reported by the last JIM-study: 76% of teenagers were found to use the service (73.3% in our sample), with boys spending around 91 Minutes and girls around 73 Minutes daily on the platform (Feierabend et al. 2022, p.39).

Thus, the social media use among teenagers in our sample very closely corresponds to the reported German-wide numbers (Feierabend et al. 2022), with the following services being the main favorites – WhatsApp, Instagram, YouTube and Snapchat.

After three weeks of complete media withdrawal we asked teenagers whether they missed social media and which ones. In their answers, teenagers mentioned most frequently WhatsApp (23%), Instagram (11%), and YouTube (2.2%) – the same services they reported to use extensively before the withdrawal.

- *WhatsApp*

After three weeks of media withdrawal WhatsApp is the services that teenagers miss most of all: every fourth teenager mentioned this service in his or her answer. This is not surprising as it was the most used service among teenagers before the trip. The main reason for missing the service – an easy and fast communication with family and friends – is also not surprising, especially considering the specific context of the trip with complete separation from family and friends.

- *Instagram*

This service was mentioned by one out of ten teenagers. Whereas half of teenagers reported missing communicating with friends, watching timelines and posting pictures, the other half mentioned Instagram in a negative context. Here teenagers especially criticized spending too much time online. Only two boys named Instagram in their answers. The fact that more girls than boys were referring to Instagram is not surprising, as this service was more popular among girls before the trip; however, the gender gap here is more prominent than before the media withdrawal.

- *YouTube*

This service was mentioned by only 2.2% of teenagers. Though this service was one of the three most popular social media services before the trip, only a few teenagers – all of them boys - mentioned it in their answers. The main reason for this can be the fact that this service functions as a source of entertainment and information for them, whereas other services, that teenagers reported to miss, focus on communication and exchange with a personal social network.

TikTok was also mentioned by 2.2% of teenagers – all of them girls. This fact corresponds to the studies reporting the raise of popularity of this service especially among girls over the last years (Feierabend et al. 2022). Similar to Instagram, some respondents reported missing it, whereas others criticized it for being a pastime trap. The other services teenagers mentioned in their answers - Snapchat, Signal, Discord and iMessage - were all mentioned in the context of missing communication and exchange with personal social networks.

The desire for communication and in some cases the feeling of missing out seem to be the main reasons to miss social media among teenagers. The need for information in context of social media was reported only by a few teenagers. While for the majority of teenagers the time without social media was perceived as relaxing and stress-free, there were a few teenagers that missed social media as a source of relaxation and an efficient way to “switch-off”.

Whereas one third of teenagers reported to miss social media services, two thirds stated that they do not miss social media or miss them to a minor extent. One of the main reasons for not missing social media was a media-related stress. Stress was mostly reported to be triggered by a permanent availability and the need to react on incoming messages. Several teenagers described social media as disturbing and intruding on the offline life. The fear to miss something was also mentioned as one of stress factors. This goes in line with studies that

demonstrate the connection between social media and stress, e.g. the research shows that Facebook users feel pressure to access the service frequently due to the fear of missing out and “to keep up with relationship maintenance demands” (Fox und Moreland 2015). Research confirms that technology and media use affect stress levels even on a physiological level (Afifi et al. 2018). A short period of media abstinence already could induce a reduction in perceived stress (Turel et al. 2018).

Several teenagers reported that they were not missing social media because they had enough communication on board. They had enough people to communicate and felt good in the community. Thus, social media were perceived as a substitution for offline communication that becomes superfluous in a case of enough interpersonal communication offline.

Teenagers described social media as extremely time-consuming and reported having much more free time without social media. Social media were reported to kill boredom and be a “pastime trap”. It goes in line with research showing that proneness to boredom may predict problem Internet use (e.g. Skues et al. 2016) and problem smartphone use (Elhai et al. 2018; Ksinan et al. 2021).

5. Conclusions and limitations

In our study we analyzed whether teenagers missed social media after three weeks of complete media withdrawal and which services they referred to in this regard. The uniqueness of our study is that it does not only give insights into teenagers’ use of social media but also shows teenagers’ reactions to long-term media withdrawal.

After three weeks of complete media withdrawal two thirds of teenagers reported not missing social media or missing them only to a minor extent. Teenagers explained that with the following main reasons: social media are stressful, social media are disturbing, social media are time consuming, social media are redundant when teenagers have enough people around to communicate with and social media are only needed to kill boredom. However, every third teenager reported missing social media. The main reason was the desire to get in contact with a personal social network. Every fourth teenager reported missing WhatsApp. One out of ten teenagers referred to Instagram in their answers; however, just half of those in a context of missing it. The fact that teenagers miss WhatsApp and Instagram is not much surprising considering its high popularity among teenagers before withdrawal (94.3% of teenagers reported having a profile in WhatsApp and 73,3% of teenagers reported using Instagram). Just a few teenagers missed social media for information and entertainment purposes. Whereas YouTube service was among the main favorites among teenagers before the media withdrawal, only very few mentioned this service in their answers (2.2%).

Our study gives some insights in teenagers’ reactions on media withdrawal. However, more studies on users’ reactions and media usage patterns before/after media withdrawal are needed to evaluate its potential in curing social media addiction and internet overuse.

Our study has some limitations. There could be a slight bias resulting from the composition of our sample: teenagers taking part in the “Classroom under Sails” project are volunteers, meaning that they agreed to take a break from social media. The reaction of media withdrawal under other circumstances could be different. The context in which teenagers were immersed is also rather unusual. Teenagers reported that they had enough communication offline and felt good in the new community that made online social networks superfluous for them to some extent. The generalizability of the results from this study could be improved by the use of a representative control group. However, it is questionable whether it could be possible to gather a control group in which teenagers would voluntarily refrain from using social media in their everyday environment on a long-term basis.

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