How Online Role Models, Gaming and Social Media Affect Youth with Special Needs in the Areas of Time Spent and Finances

Country: Countries in the European Union

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Activity 1: Examine - Desk Research

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1 Introduction

This report was written to inform about the actual data and studies about adolescents with special educational needs in European countries and their online behaviour including online games, social media and role models. The focus is especially set on the time spent and the financial impact. As there is only little to no data fitting the target group of this report, the report includes studies of adolescents without special educational needs in European countries. For some research questions there was only found worldwide data from adolescents. To get an overview of the topic and an insight in online gaming, online role models and used social media from youth, these studies and data has been included, too.

2 Gaming

2.1 Relevant Games and Platforms

Research Question: What kind of games over which platforms are played by the target groups?

In September 3rd 2024 the website ”Statista” published data about the most popular video games genres among internet users worldwide. They distinguished the results by age group. The relevant age groups for our project are the 16-24 years old and the 25-34 years old. As seen in figure 1 the most popular video game genre among these age groups are Shooters although the percentages are slightly different (63% for 16-24 y/o and 59,1% for 25-34 y/o). In second place comes action adventures with 57,9% for the 16-24 years old and 54.4% for the 15-34 years old. In both age groups the genre MOBA (multiplayer online battle arena) is in third place with 40,6% of the 16-24 years old and 40,8% of the 25-34 years old playing these video game genres (Clement, 2024b).

All in all, the results are for both age groups very similar. The only differences exist in the gerne Battle Royale and Action Role Play. Only the younger age group plays Battle Royale games, whereas they don’t play Action Role Play games, which is the case for the older age group (Clement, 2024b.)

Characteristic	16-24 years old	25-34 years old
Shooter	63%	59.1%
Action adventure	57.9%	54.4%
MOBA	40.6%	40.8%
Sports	40.4%	41.6%
Simulation	38.9%	36.7%
Battle royale	38.2%	-
Racing	36.3%	38.4%
Strategy	34.3%	35.1%
Puzzle platform	32.9%	34.7%
Fighting	31.7%	32.6%
Action platform	-	-
Online board games	-	-
Action R.P.G	-	33.2%

Figure 1: Most Popular Video Game Genres among Internet Users Worldwide by Age Group (Clement, 2024b)

Statista also did a survey of the best-selling video games in Europe in 2023. The results for the best-selling video games are e.g.: *EA Sports FC 24, Hogwarts Legacy, Legend of Zelda: Tears of the Kingdom* and *Super Mario Bros. Wonder.* The detailed results distinguished by European country can be seen in figure 2 (Clement, 2024a).

Characteristic	1st	2nd	3rd
Overall	EA Sports FC 24	Hogwarts Legacy	Legend of Zelda: Tears of the Kingdom
Austria	FIFA 23	Super Mario Bros. Wonder	EA Sports FC 24
Belgium	EA Sports FC 24	Hogwarts Legacy	Legend of Zelda: Tears of the Kingdom
Czechia	Hogwarts Legacy	EA Sports FC 24	Marvel's Spider-Man 2
Denmark	EA Sports FC 24	Hogwarts Legacy	Legend of Zelda: Tears of the Kingdom
Finland	NHL 24	EA Sports FC 24	Hogwarts Legacy
France	Legend of Zelda: Tears of the Kingdom	EA Sports FC 24	Super Mario Bros. Wonder
Germany	Legend of Zelda: Tears of the Kingdom	EA Sports FC 24	Super Mario Bros. Wonder
Hungary	EA Sports FC 24	Hogwarts Legacy	FIFA 23
Italy	EA Sports FC 24	Hogwarts Legacy	FIFA 23
Netherlands	Hogwarts Legacy	EA Sports FC 24	Legend of Zelda: Tears of the Kingdom
Norway	Legend of Zelda: Tears of the Kingdom	EA Sports FC 24	Hogwarts Legacy
Poland	EA Sports FC 24	FIFA 23	Hogwarts Legacy
Portugal	EA Sports FC 24	FIFA 23	Hogwarts Legacy
Slovakia	EA Sports FC 24	Hogwarts Legacy	FIFA2 23
Slovenia	FIFA 23	EA Sports FC 24	GTA V
Spain	EA Sports FC 24	Legend of Zelda: Tears of the Kingdom	Super Mario Bros. Wonder
Sweden	Legend of Zelda: Tears of the Kingdom	Hogwarts Legacy	Super Mario Bros. Wonder
Switzerland	Legend of Zelda: Tears of the Kingdom	EA Sports FC 24	Super Mario Bros. Wonder
United Kingdom	Hogwarts Legacy	EA Sports FC 24	Legend of Zelda: Tears of the Kingdom

Figure 2: Best-selling Video Games in Europe in 2023 (Clement, 2024a)

Regarding the devices, which are mostly used for playing Video games, Statista found out that the smartphone is the most used device among the 18+ years old. The highest rate of smartphone users has Italy with 65%, while Denmark has the lowest rate with only 48% playing Video games with their smartphone. For the countries Great Britain, France, Sweden and Spain the game console is on second place with a rate which varies between 36% (France) and 48% (Great Britain). For the countries Germany, Italy, Denmark and Poland the desktop/ laptop computer ranges on second place with 35%

laptop users in Italy and 50% of laptop users in Germany. The percentage of video gamers using a tablet differs strongly, depending on the country. Whereas 24% of Germans, Italians and Swedens use a tablet as a gaming device only 12% of Poles use tablets for that purpose. Only a few participants of the survey stated to use High-end PCs, VR headsets and handheld gaming devices (Clement, 2023). The exact distribution of the percentages of used device by country can be seen in figure 4.

Characteristic	Smartphone	Game console	Desktop / laptop computer	High-end PC specifically built	Tablet	VR headset	Handheld gaming device
Global total	64%	34%	40%	11%	23%	6%	10%
Great Britain	49%	48%	33%	12%	19%	4%	11%
Germany	58%	42%	50%	5%	24%	3%	8%
France	64%	36%	32%	9%	21%	3%	9%
Italy	65%	29%	35%	5%	24%	4%	5%
Denmark	48%	23%	38%	7%	23%	5%	6%
Sweden	55%	42%	40%	17%	24%	5%	14%
Spain	61%	39%	34%	10%	23%	4%	17%
Poland	60%	31%	46%	12%	12%	3%	5%

Figure 3: Video Gaming Device Usage (Clement, 2023)

2.2 Target Group Demographics and Behavior when Gaming, including Time Spent

Research Questions: Who plays which games? How many in the target group play these games? When/ how much time do youth spend playing these games?

In 2023 an online polling were made by Video Games Europe to find out how many of the European citizenship plays video games. They asked people aged between six and 64 years old from the European countries France, Germany, Spain, Italy and UK. The results were the following: 19% of the six to 14 years old, 22% between the 15 to 24 years old and 19% of the age group of the 25 to 34 years old play video games. The percentage of the 25 to 34 years stayed the same as the year before whereas the percentage of the six to 14 years old and the 15 to 24 years old has risen by 1% in comparison to last year (Video Games Europe, 2023).

The question whether more boys or girls play video games or what the exact gender distribution of the two genders is among gamers has been part of several polls. In the *European Key facts 2023,* published by Video Games Europe, the results show that 26% of women in the age group 6-17 years old and 32% of the 18-34 years old play video games. The data is based on polling 12.000 people between six and 64 years old online from the countries France, Germany, Spain, UK and Italy (Video Games Online, 2023).

Almost the same findings were made by Smahel, Machackova, Mascheroni, Dedkova, Staksrud, Ólafsson, Livingstone and Hasebrink (2020). In their publication *EU Kids Online 2020: Survey results from 19 countries* they found out that in all surveyed countries boys play more online games than girls. While in average 56% of boys answered the question on how often they play online games with *daily or almost daily*, *several times a day* or *all the time,* only 29% in average of the girls said so. There were no results for the countries Finland, Rumania and Flanders. Although girls play less online games than boys in all countries the difference between boys and girls differs highly from country to country. Whereas 61% of boys and only 24% of girls in Czech Republic playing video games the percentage of girls and boys in Lithuania playing video games is almost even (77% for boys, 65% for girls). A detailed overview of the results is displayed in figure 5 (Smahel et al., 2020).

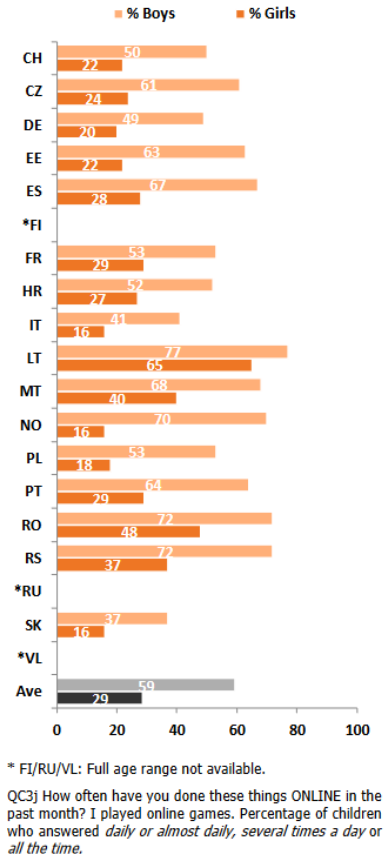

Figure 4: Playing Online Games Daily, by Gender (Smahel et al., 2020)

Beside the question of the distribution of boys and girls playing video games another research interest was to find out how much time youth is spending on online games. There exists an overview of the average time people (aged between six and 64 years old) from Western European countries spent on playing video games in hours per week on Statista. In 2023 people from France, Spain, UK, Italy and Germany spent in average 8,9 hours per week on playing video games (Clement, 2024).

A more detailed data provides Smahel et al. in their EU Kids Online Survey from 2020. They asked children between nine and 16 years old whether they played online games in the last month. Figure 5 shows the results. In Lithuania and Romania for example the percentage of children playing online games on a daily or more often basis is very high with 71% for Lithuania and 60% for Romania. In

Slovakia and Italy, on the other hand, only 27% (SK) and 28% (IT) of the children play online games daily or more often. In average 44% of the children play online games daily. On the opposite 34% of the children play never or hardy never online games (Smahel et al., 2020).

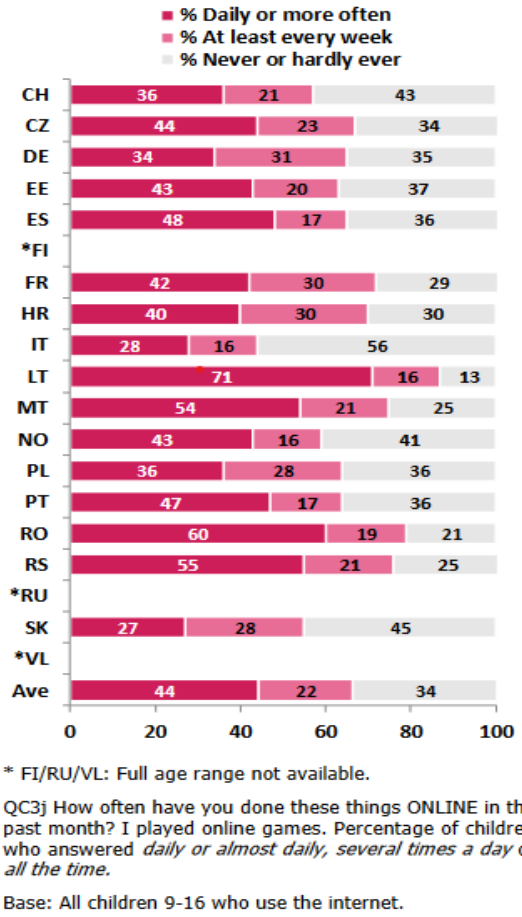

Figure 5: Frequency of Playing Online Games, by Country (Smahel et al., 2020)

Furthermore, the research group around Smahel broke down the results into different age groups. Surprisingly the age group of the 12-14 years old has the highest percentage rate of playing online games daily or more often with 47%. In second place comes the age group of the 9-11 years old with 43% and in last place the age group of the 15-16 years old with only 41% (Smahel et al., 2020).

2.3 Financial and Further Impact of Gaming

Research Question: What are the costs and cost structure of these games? How much money does the target group spend on these games? What are known outcomes of the target group playing these games?

Nowadays a new form of online games is increasing: the so-called free-to-play games. Others than games that are initially bought, these types of games can be downloaded and played for free. The concept is based on microtransaction. The gamers can buy additional items and services within the games. (Costes & Bonnaire, 2022). “There are three types of microtransactions: cosmetic microtransactions (e.g., aesthetic changes within the game like alternative costumes), pay-to-win

microtransactions - that can increase the gamer's chances of in-game success by purchasing items or bonuses - and loot boxes which provide players with a randomized reward of uncertain value, introducing randomness to in-game purchases" (Costes & Bonnaire, 2022). Especially in free-to-play games, so-called in-game purchases are aggressively marketed as this is the way they are financed. Adverts to buy anything pop up again and again. If users aren't careful and if their user account is linked to payment information, it is easy to unintentionally click on that advert and to do a microtransaction. Therefore, this type of games can be a real cost trip (Verbraucherzentrale, 2024).

According to a poll, conducted by Ipsos in 2023 and including the countries Germany, Spain, Italy, France and UK, 76% of interviewed parents claim that their children don't spend money on any games. 16% admit that their child spends money on in-games and 7% don't know about it. Most of the children, who spend money on in-game, spend an amount between 1€ and 20€ (64%). 16% spend between 21€ and 40€, 12% spend between 41€ and 60€, 1% spend between 61 and 80€ and 7% spend over 80€ per month. All in all, the average amount of spent money is 39€ per month (Ipsos, 2023).

In addition to the financial impact, video games may have other negative and positive effects on youth. Negative effects can be for example the encouragement of violent behavior, sedentary behaviors, poorer academic performance and an excessive use of video games (Kuo, H. J., Yeomans, M., Ruiz, D., Lin, C.-C., 2024 & IEA, 2022).

The Institute for Educational Advancement lists in their online Blog the encouragement for violent behavior as one risk of video games. In the majority of video games violent content can be found (90%) and 40% of the games contain serious violence against other characters (Kuo et al, 2024). Several studies show that there is a correlation between violent video games and criminal behavior. Players, who watch simulated violence, as in video games, may become immune to the violence and may act more violently themselves (IEA, 2022). Although this connection was found by several studies, other research papers question how strong the impact really is and point out that there are much stronger predictors for violent behavior such as home environment or the relationship with parents (Kuo et al., 2024).

Spending too much time playing video games can lead to another negative effect of gaming: sedentary behavior. Playing video games is normally a sedentary activity. The time children and adolescents spent on playing video games leads to less physical activities what in turn give rise to a higher risk of adiposity and cardiovascular diseases. However, video games companies are aware of this problematic and try to prevent these health issues by implementing full-body movements or prompting the players to rest after a period of continuous playing (Kuo et al., 2024).

Several research claim that there is a negative effect of playing video games on academic performance. Children, who are video game addicted, "[…] have lower grades and have more destructive behaviors such as arguing and fighting with parents and teachers." (IEA, 2022). In a study conducted by Jackson et al. it was found out that there exists a negative correlation between video games and academic performance. But Jackson et al. also clarified that this correlation only exists for children with lower grades at school (Jackson et al., 2011).

One of the most quoted concerns of playing video games is the excessive use of video games and the risk of developing an Internet Gaming Disorder (IGD). In fact, Gaming Disorder has been included in the newest revision of the International Classification of Diseases (ICD-11) and is defined "[…] as a gaming behavior of sufficient severity to result in significant impairment in areas of function." (Kuo et al., 2024). It must be admitted, though, that only 0,3 to 1,0% of the general population may qualify for a IGD diagnosis. The difficulty lays in distinguishing between gaming addiction and passionate gaming (Kuo et al., 2024). Nevertheless, excessive gaming might lead to an IGD and is therefore a potential risk for youth.

Besides the mentioned negative impact video games may have on children and adolescent, there exist almost the same number of positive effects video gaming has on gamers. As listed on the website of IEA (2022) these are:

- Providing children with problem solving skills and enhancing creativity,
- Teaching kids about history and culture,
- Helping children to make friends,
- Allowing kids to share the joy of competition,
- Enhancing leadership skills in children,
- Motivating children to teach others and
- Improving children's memory.

Games that can provide children with problem-solving skills and that can enhance creativity are for example *Legend of Zelda* or *Minecraft.* The player in these games must find unique solutions to overcome obstacles and to continue the game or has "[…] to utilize 'modding' (modification) options to customize their character's appearance." (IEA, 2022).

The content of some games is based on real-life historical events. They can evoke interest in history, geography and ancient cultures so that they inspire learning (IEA, 2022).

As playing video games is a widespread activity among children and adolescent it is easy to find a connection and field of interest with others trough exchanging about different games. Most games have also a multiplayer option so that people can play together. The gamers can be in the same room and play together or use an internet connection to connect with other gamers of the game and chat with them. Therefore, video games can be helpful to make new friends (IEA, 2022).

One natural and healthy behavior of children is to compete. Video games enable competition between different people. It is also a good opportunity for those, who don't have the abilities in the real world, as they might not be good in sports for example, to show what they can and to keep up with others (IEA, 2022).

Children who play online video games can learn or develop leadership skills while playing certain games. This results from the fact that they alternate between leading and following in the game. Young adults, for example, stated that they felt they learnt leadership skills such as persuasion, motivation and meditation in online games (IEA, 2022).

Playing video games together also have the positive effect that children can learn from and teach each other. Most of the children like to share their experience how to get on in the game, how to collect different items or how to use special tools to overcome obstacles (IEA, 2022).

One last positive effect of video games is listed on the website of IEA: studies found out that video games can have a positive impact on the child's memory and that they "[…] facilitate cognitive changes in the brain." (IEA, 2022). Video games are not only good for the memory but can also help to train people with disabilities. "[…] video games were found to be effective for developing social skills in children with dyslexia, learning difficulties, and autism spectrum disorder (ASD)." (Kuo, 2024). They can also improve "[…] behavioral, cognitive, and emotional outcomes of those with learning and cognitive disabilities." (Kuo, 2024), when the games contain content with cognitive behavioral techniques (Kuo, 2024).

3 Social Media

3.1 Relevant Social Media Channels and Social Media Functions

Research Questions: On which social platform is the target group active? Which functions do they use?

Statista published a summary of the social media use in Western Europa in September 2024. They found out that the most popular social media platform is Facebook with over 449 million of users (Status: 2023), followed by Instagram, which has around 294 million users. Other platforms, such as TikTok, Reddit and Snapchat are continually growing and gain more and more popularity (Dixon, 2024a).

Especially TikTok and Snapchat are growing social media platforms. In Spain, for example, TikTok has already approximately 21.60 million users and therefore only 1 million users less than Instagram (22.60 million users). Mostly young people of the Generation Z prefer platforms such as TikTok, whereas older people heavily use Facebook as social media platforms (Dalmain-Jones, 2024).

Similar results can be found in France. In the age group of the 15-24 years old most users are active on Snapchat (82%), followed by Instagram (69%) and on third place Facebook and TikTok (both 40%). For the age group of the 25-49 years old the most popular social media platform is Facebook with 60%. In second place are Snapchat and WhatsApp with both 35%. Instagram is only in fourth place with 29% and Tiktok is just in seventh place with 6% (Lemmetty, 2024).

Another finding of EU Kids Online is, that the use of social networks sites has changed. Although Facebook is still the most popular social media platform, children are likely to migrate "[…] to other platforms such as Instagram or to instant messaging services like WhatsApp." (Smahel et al., 2020).

Social media is used for different functions such as sending private messages, commenting on posts, posting pictures/ videos/ texts/ status updates, liking posts, following people, reading news items, filling

spare time and keeping in touch with family and friends. In Germany and France, for example, sending messages is the most used function of social media. In the UK it is liking other posts. In 2022 Italians used social media especially for reading news items, "[…] followed by filling spare time, and keeping in touch with families and friends." (Dixon, 2024a).

3.2 Target Group Demographics and Behaviour on Social Media, including Time Spent

Research Questions: Who is active on the channels? How many in the target group are active on these medias? When/ how much time do youth spend on social media?

In the EU Kids Online report Smahel et al. asked the participants how often they visited a social networking site. The highest rate of children visiting a social networking site has Serbia. 73% answered the question on how often they are on social media with daily. In second place comes Portugal with 67% and third place is Czech Republic with 66% of the children being on social media daily. On the opposite, Spain has the highest rate of children, who are never or hardly never active on social media with a percentage of 50%. In France 44% of the children aren't visiting social media platforms and in Germany the percentage is 43%. In average 54% of the interviewed children use social media daily or more often, whereas 33% use them never or hardly never (Smahel et al, 2020). A detailed overview of the frequency of visiting social networking sites by country can be found in figure 6 below.

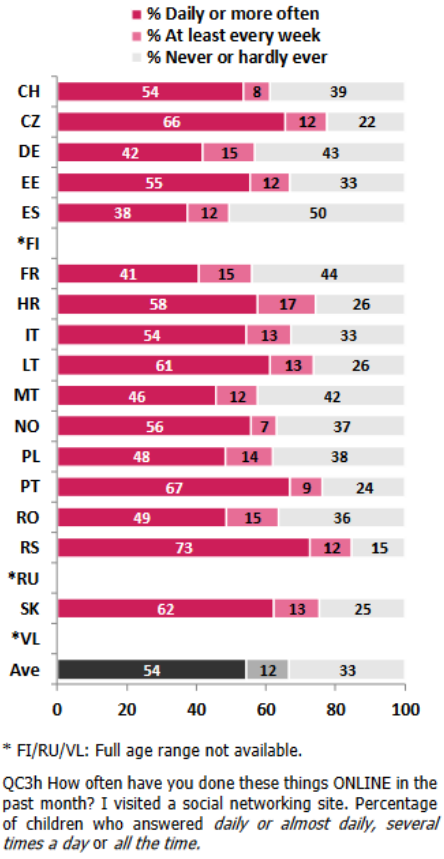

Figure 6: Frequency of Visiting Social Networking Sites, by Country (Smahel et al., 2020)

In addition to breaking down the frequency of visiting social networking sites by country, Smahel et al. also differentiated by gender and age group in the different European countries. When looking on the difference between girls and boys it stands out that in all countries, except in Romania, girls more frequently use social media websites than boys. The highest difference is in Portugal and France, where 10% more girls than boys visit these platforms (France: 36% boys, 46% girls; Portugal: 62% boys, 72% girls). The smallest difference can be seen in Spain and Serbia with only one percentage point difference (Spain: 37% boys, 38% girls; Serbia: 72% boys, 73% girls). Romania is the only country, where more boys (49%) than girls (48%) visit social media platforms. The average percentage of boys using social media is 51% and of girls 57% (Smahel et al., 2020). More details can be extracted of figure 7.

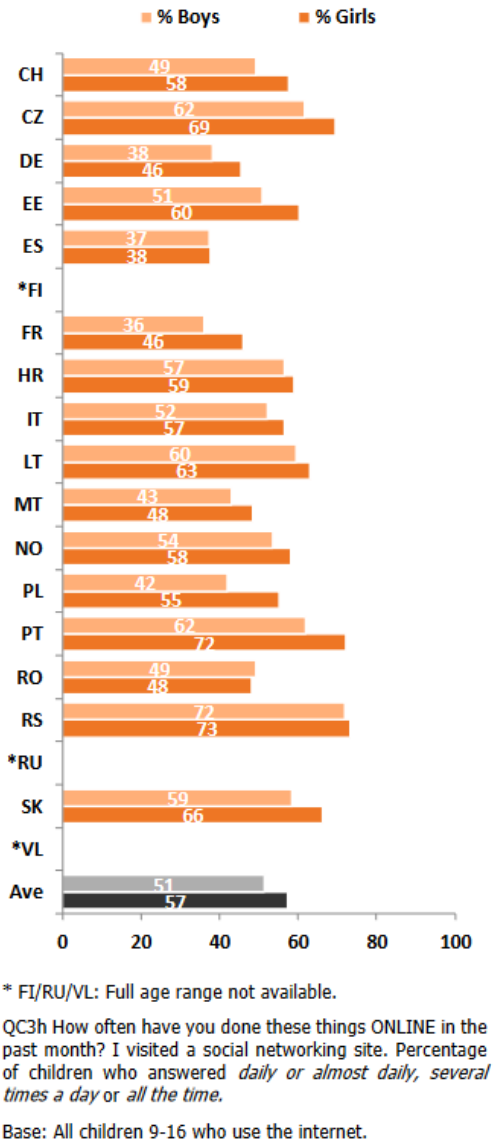

Figure 7: Visiting Social Network Sites Daily, by Gender (Smahel et al., 2020)

Smahel et al., parted the sample into three different age groups: the 9-11 years old, the 12-14 years old and the 15-16 years old. Regarding the use od social media platforms, it can be sad that the oldest age group uses social platforms the most in all countries. Serbia and Czech Republic have the highest

percentage of user, who are between 15 and 16 years old (both 93%). If one disregards the data from Finland (Data is not weighted) the lowest rate has Spain in this age group with just 58% of the adolescents visiting social media platforms. However, this finding isn't surprising as Spain has the lowest rate of children using social media platforms daily in general. In average 77% of the teens use social media daily (Smahel et al., 2020). The figure 8 provides a more detailed overview.

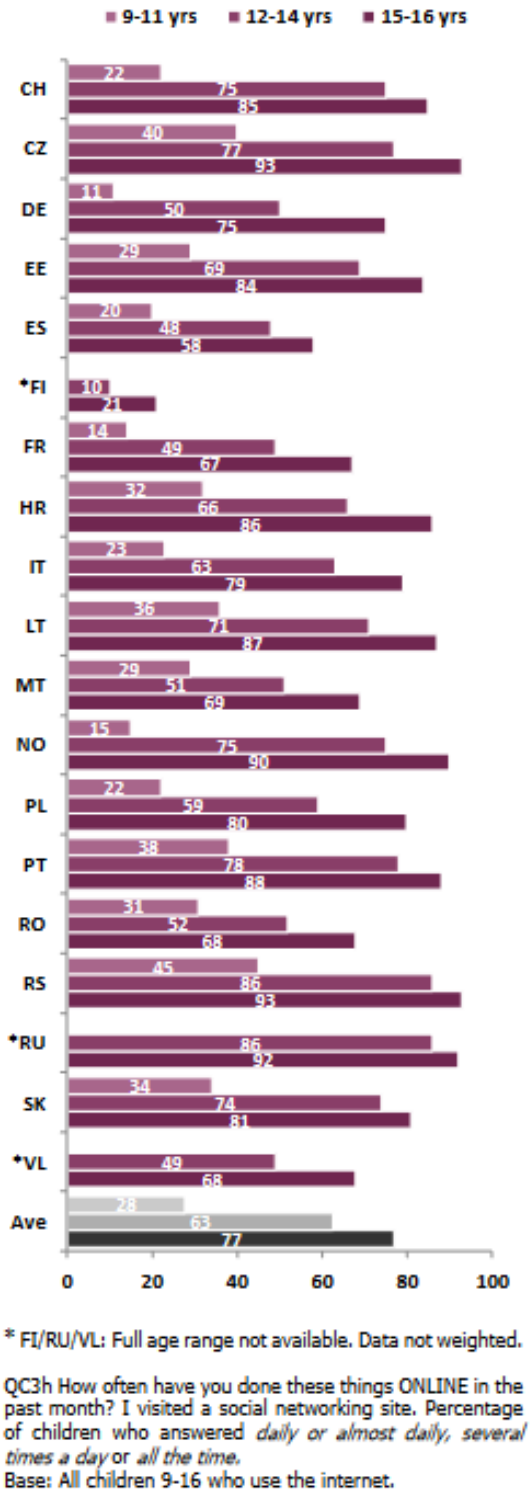

Figure 8: Visiting Social Network Sites Daily, by Age (Smahel et al., 2020)

On the website Statista an overview of the average time people spend on social media daily can be found. They asked participants of 51 different countries and between 16 and 64 years old what their average daily time spent on social media is. Globally people spend two hours and 26 minutes daily on social media. Of the European countries surveyed, Bulgaria hast the highest daily social media usage at two hours and 38 minutes. It is followed by Portugal (2h 28m) and Romania (2h 26m). Netherlands and Belgium are on the last positions of the European country with an average daily time spent on social media at one hour and 31 minutes (Netherlands) and one hour and 30 minutes (Belgium) (Dixon, 2024b).

3.3 Financial and Further Impact of Social Media Consumption

Research Questions: What are the costs and cost structure of these platforms? How much money does the target group spend over social media? What are known outcomes of the target group being on social media?

Internet users are used to not to pay for social media and that they can use them as a free service. Nevertheless, since 2022/2023 some social media platforms such as Snapchat, Facebook, Instagram and X (formerly Twitter) start to offer fee-based versions for their users. The prices vary from $3.99 (Snapchat) to $14.99 (Facebook/Instagram) monthly (Hult & Morgeson, 2023). However, some of the paid services aren't available in Europe and for Creators and businesses only such as Meta verified (Facebook/ Instagram) (Newberry, 2023).

To be active on social media requires an internet access. Here lays one barrier for people with disabilities as they often have less opportunities to get online. Reasons for that, for example, lay in "[f]unctional variations and impairments, education training and support and political, economic and attitudinal climate" (Borgström, Daneback & Molin, 2019, p. 129). In the EU, the chance for people with disabilities to have internet access at home is 62% lower than for non-disabled people (Borgström, Daneback & Molin, 2019).

Sala, Porcaro and Gómez analysed and summarized in their umbrella review the following opportunities and risks of social media use:

- "Opportunities: identity development, online social support, promotion of healthy behaviours and access to online professional support.
- Risks: Association with depressive and anxious symptoms, problematic social media use (social network addiction), eating behaviours and body image concerns, and deliberate self-harm and suicidality." (Sala, Porcaro & Gómez, 2024, p. 8).

These opportunities and risks also apply on adolescents with intellectual impairments. Social media functions as "[…] an alternative to expand the social circle, keep in contact with others and express thoughts and opinions in a setting the person feels he or she has more control over" (Borgström, Daneback & Molin, 2019, p. 135). In addition, youth with intellectual impairments have the possibility

not to be reduced to their disability as they don't have to mention it and interact as non-disabled people (Borgström, Daneback & Molin, 2019).

On the other hand, adolescents with impairments must face more cruel actions, cyberbullying and threats than compared to non-disabled people when using social media. Especially financial and sexual exploitation and victimization are predominant for this group (Borgström, Daneback & Molin, 2019). "The internet carries significant risks for individuals with poor insight and social judgement, and clinicians should discuss online use and its potential benefits and risks on a regular basis with this population." (Borgström, Daneback & Molin, 2019, p. 136).

4 Role Models

4.1 Role Model Types and Values

Research Questions: What kind of role models do youth with special needs gravitate towards? What kind of values do these role models stand for?

With the growing popularity of social media, the numbers of influencers have grown, too. There doesn't exist specific data about influencers, who are followed by adolescents with disabilities, but probably they are following the same people on Instagram, TikTok and Youtube as other teenager in the same age. Adolescents are often seeking for social contact und are looking for figures to identify with. That's why influencer have such big impact on people in that age. The content they're producing is tailored to the audience and the followers have the feeling they are interacting with friends as their everyday life and the problems of influencers seem familiar to their own (MediaParents, w.d.).

In the following sections some of the most popular European influencers will be introduced. There will be a distinction between the different social media platforms.

PewDiePie is the most subscribed Youtube channel in Europe with 111 million subscribers. Behind the channel stands the Swedish content creator Felix Arvid Ulf Kjellberg. He retired from Youtube in 2020, but still upload content, albeit inconsistently. He mainly posts Let's play videos, but also vlogs and comedy sketches (Wikipedia, 2024c).

Khaby Lame is an Italian TikToker, who has 162,6 million of followers, what makes him the most popular TikToker worldwide. In his TikTok shorts he often mocks silently about absurd lifehacks by solving the shown problems in a simple way, followed by his typical hand gesture (Wikipedia, 2024a)

The Portuguese footballer **Christiano Ronaldo** has the most followed Instagram account worldwide, counting 641 million followers. He mainly posts pictures and shorts from his daily life as a footballer (Wikipedia, 2024b).

Of course, there are also influencers with different type of disabilities that often share their life with impairments and aim to make disability visible for others. For adolescents, who suffer from disabilities by themselves, these influencers might be good role models, because as said in the previous section

influencers have such a big impact on youth as they can identify with them. In the following some disabled influencers will be introduced.

Daniel M Jones is a British influencer, who was diagnosed with Autism and ADHS. His account **The Aspi World** counts 47k followers. His focus on Instagram and Youtube is to increase Autism awareness and to give insights from an autistic person's point of view (Disability Horizons, 2022).

Samantha Renke is an influencer from London with 20,9 thousand followers. She was born with brittle bones disease. She is an author, actress and disability activist and "[…] was named the third most influential disabled person in The Shaw Trust's Power 100 list of 2020, nominated as Campaigner of the Year in the 2019 European Diversity Awards and shortlisted as Celebrity of the Year at the National Diversity Awards 2020." (Disability Horizons, 2020).

A popular influencer from USA with spinal muscular atrophy is **Shane Burcaw.** He has 615 thousand followers on Instagram and his Youtube channel *Squirmy and Grubs* has 1,78 million subscribers. He and his wife mainly post about their life as an interabled couple in a humoristic way (Disability Horizons, 2022).

4.2 Potential Impact of Role Models on Target Group

Research Questions: What kind of impact do these role models have? How extensive is this impact?

As already mentioned in the sections above, children and adolescents use the internet and therefore social media daily. In the European Union 95% of the adolescents between 16 and 19 years old do so. Knowing this fact, De Castro et al. (2021) point out why influencers have such impact on that age group:

> "[…] digital influencers seem to be a crucial influence in the lives of young people, firstly, because adolescents spend a large part of their time online and are therefore very much exposed in a range of ways to influencers' content. Secondly, adolescents increasingly relate personally with SMIs and turn to them not only for entertainment but also for information, advice, company and comfort." (p. 59).

Therefore, influencers often influence all areas of the lives of their target group. They can have positive and negative impact on the audience depending on the content they are posting and the specifics of the audience (e.g., gender, age) (de Castro et al., 2021).

Positive influence could be, for example, to promote a healthy lifestyle by cooking healthy recipes or animating to do sports, promoting a sustainable lifestyle, promoting inclusion or educating about political or social themes (de Castro et al., 2021).

Negative influence could be, for example, to promote an unhealthy lifestyle by drinking too much alcohol or smoking, to encourage, especially young girls, to strive for unrealistic beauty standards or to promote racism and exclusion (de Castro et al., 2021.

Influencers have another major influence on the purchasing behaviour of their target group. Influencers are often used/ paid by companies to promote their products. These products are then used and recommended by the influencers to their audience. These can influence the purchasing behaviour (de Castro et al., 2021).

5 Legal Framework and Environment

5.1 European Legal Framework for Protecting Youth in the Area of Online Risks

Research Question: What is the legal framework for protecting the target group and youth in general from the consequences of gaming and social media?

There are several measures to protect youth in the video game sector. The most prominent measure is the pan-European system for the age classification of video games, co-called PEGI (Pan European Game Information). It is used in 38 countries and it "[…] is a very accessible and dependable system, combining logical iconography for parents and caregivers at the point of purchase with a robust Code of Conduct for companies." (Video Games Europe, w. d.). The countries, which use the PEGI, have signed a contract to apply the rules accompanying with the code. The main aim of PEGI is to provide a safe online environment by dealing with age labelling, promotion and marketing and provision. It ensures, for example, that children and young people don't deal with inappropriate content for their age (Video Games Europe, w. d.).

In 2018 a new tool was introduced, an in-game purchase descriptor. It is a note, which informs the video game player that there is the possibility to purchase items in the game for example loot boxes, card packs or prize wheels (Video Games Europe, w. d.).

Another safety aspect are parental control tools, which are available on all consoles and devices. These tools include setting screen time limits, purchase limits and limitations for in-game communication. These options are more and more often also available for PC and mobile video games platforms (Video Games Europe, w. d.).

Another measure to make online video games as a safe environment is, to inform all parents about PEGI and the existing parental tools, Video Games Europe "[…] runs regular media education campaigns targeting national audiences in local languages" (Video Games Europe, w. d.). The following figure shows the national collaboration agency with Video Games Europe.

Figure 9: National Agencies collaborating with Video Games Europe (Video Games Europe, w. d.)

In order to protect the rights of social media users, the European Union has adopted a series of rules including the protection of personal data and privacy or the digital services act. In 2016 the General Data Protection Regulation (GDPR) was adopted by the EU. The rights for the internet users include to "access, correct and erase personal data held by companies; receive your personal data collected by a company and to have it transmitted to another company; and receive notification of a personal data breach." (Ask EP, 2024). The national data protection authorities enforce the GDPR. They can inquire into complaints and suspicious actions and are independent from the government. The aim is "[…] to ensure consistent application of the rules across the EU through the European Data Protection Board." (Ask EP, 2024).

The Digital Services Act was adopted by the EU in February 2024. It makes social networks legally liable for their users if they behave unlawfully and if the social networks are aware of this behaviour. As unlawful content counts, for example, child sexual abuse material, terrorist content, illegal hate speech and illegal goods and services (Ask EP, 2014). The new rules adopted include:

- "Countering illegal content and dangerous and counterfeit goods, by making it easier for users to report them and for authorities to enforce action against them;
- Tackling online harassment and cyber bullying, by making sure any non-consensual private images and other abusive content can be quickly flagged by users and removed;
- Protecting children, by requiring platforms to ensure a high level of privacy, safety and security of minors on their services;
- Banning targeted advertising online based on profiling children or on sensitive data like sexuality, religion or race;

- Banning ‘dark patterns’ or ‘nudging’ techniques that might manipulate users into making choices they do not intend to make.” (Ask EP, 2024).

If companies such as Facebook, Instagram, TikTok or X don’t comply to these rules have to pay a fine in the millions and risk an EU-wide ban (Ask EP, 2024).

Another law is in progress, which aims to prevent addictive behavior by forbidding “[…] addictive design features such as automatic play and infinite scrolling” (Ask EP, 2024). There is also the attempt to prohibit attention-seeking features by implementing a “right not to be disturbed” function (Ask EP, 2024).

5.2 Highlights and Issues with the Legal Framework

Research Questions: What are the issues here? Are there any positive points to mention – new developments etc.?

The gaming sector is a constantly and fast evolving field. PEGI is always trying to accompany this development by adapting its code of conduct. The newest adaptions were made 2007, when PEGI was expanded to cover online environment and in 2023, when new monetising techniques and social interaction features were taken into consideration for the PEGI rating (Video Games Europe, w. d.). “An international group of independent experts assists PEGI in keeping the rating criteria relevant and up to date.” (Video Games Europe, w. d.).

Concerning the General Data Protection Regulation, the EU Agency for Fundamental Rights published a new report in which it is addressing current problems by enforcing the EU data protection. The main issues are for example the lack of resources, not enough tools for reinforcing supervisory powers, no exchange of best practices or no involvement in consultations (FRA, 2024).

In 2023 the Federation of German Consumer Organisations investigated whether large online platforms (Facebook, Instagram, TikTok, etc.) and search engines (Google Search, Amazon, etc.) enforce the rules, which came with the Digital Services Act. They found out, that the investigated platforms (Amazon, Apple App Store, Bookin.com, Facebook, Google Shopping, Google Search, Instagram, Snapchat, TikTok, X, Youtube and Zalando) are often not implementing the law properly. Since the law became effective it is for example forbidden to use dark patterns. (Verbraucherzentrale Bundesverband, 2023). Dark patterns means that design tricks are used “[…] to exploit typical human behaviour or perception patterns. Examples include the colour design of buttons or requiring numerous clicks to complete an action.” (Verbraucherzentrale Bundesverband, 2023). Platforms like Amazon or Youtube continue to use such design tricks. Another rule that comes with the Digital Services Act is that users need to be informed about the advertising criteria. These criteria must be available by clicking on the advertisement. The Federation of German Consumer Organisations found out that neither Instagram and Snapchat nor TikTok and X provide this information. However, these platform label at least relevant content as advertisement (Verbraucherzentrale Bundesverband, 2023). The results from the Federation of German Consumer Organisations show that there still work needs to be done to protect the online users properly.

5.3 Cyber Criminality as an Aspect of Financial Impact

Research Questions: How extensive is the issue and impact of cyber criminality for this specific target group and what is done to protect them?

In order to find out how people with learning disabilities are affected by cyber criminality, it is first necessary to clarify what cybercrime includes. Depending on the research paper there are existing three to four risk types of cyber criminality. In European research there are usually named three subtypes: "(i) Exposure to harmful, manipulative or exploitative content (e.g. harmful sexual material, scams); (ii) Experiencing negative contact online (e.g. being bullied, being groomed for sexual contact/ radicalisation); and (iii) Engagement in criminal or antisocial behaviour or conduct (e.g. online bullying, trolling or flaming, sending inappropriate content." (Dr. Chadwick, 2019, p. 1). Originally these categories were applied on people without an intellectual disability and have been adapted so that they can be used for people with disabilities. However, this adaption is controversial (Dr. Chadwick, 2019).

Several studies investigated how people without disabilities (general population, parents and professionals of people with disabilities) perceive the risk of being online for people with disabilities. In conclusion all questioned people see a higher risk of being online for people with learning impairments. In general, those people see the greatest risks for people with disabilities in "[…] being bullied, threatened or harassed online, being susceptible to online marketing scams and providing too much personal information." (Dr. Chadwick, 2019, p. 3). Teachers especially see the risk in being isolated, in not understanding the internet content accurately and in being naive. Parents, on the other hand, were concerned that their children with learning disabilities could be too trustful, can't detect deception and that they are more sensitive to content and contact online. The problem with these perceptions is that it might lead to exclusion of people with disabilities in order to prevent them from these risks, although the risk of exclusion might be higher (Dr. Chadwick, 2019).

A research from 2017 interviewed 77 adults with learning disabilities and asked them what kind of risks they've already faced online. According to this research 48% experienced to be blocked from online groups and activities, 46% experienced to be insulted, 35% made experiences with threating, the same percentage were sent unwanted sexual media and 36% reported that their passwords has been used by other people without consent (Chiner et al., 2017). In this research caregivers were also interviewed, and it was highlighted that people with disabilities aren't always only victims but also perpetrators showing antisocial and inappropriate behaviour such as "[…] being insulting, threatening or engaging in unwanted flirting." (Dr. Chadwin, 2019, p. 4).

To protect young adults with learning impairments from the risk of being online caregivers often use different restrictions to protect them. These restrictions range from supervision and monitoring to blocking specific websites. However, these measures might lead to undermine skill development, self-determination and digital participation (Dr. Chadwick, 2019).

There exists a practical guide for people with disabilities how they stay safe online from the Foundation for People with Learning Disabilities, but the effectiveness isn't proofed as there exist only a few

intervention studies. There also exists "[…] a psycho-educational therapeutic group to address the negative online experiences of people with ID[1]" (Dr. Chadwick, 2019, p. 6). In this group self-esteem and assertiveness has been trained in order to equip the participants with skills that enable them to make better informed decisions about what to share safe on the internet. "Participants reported enhanced confidence in problem-solving and discussing online risk." (Dr. Chadwick, 2019, p. 6).

6 Best Practice Providers

As this report is focusing on findings in Europe and not a particular country, it was difficult to find specific best practice providers, acting on an international basis. Surely, it would have been possible to find best practice providers for each European country, but as the follow-up activities only take place in Germany and Ireland, this wouldn't have fulfilled the target.

Nevertheless, there exist an Online Platform called *Better Internet for Kids.* It was developed on behalf of the European Commission and has the purpose "[…] to share resources, services and practices between national providers of the services – the European Safer Internet Centres (SICs) – and to provide services to their users and other relevant stakeholders." (Better Internet for Kids, w. d.).

On the platform can be found articles about online safety topics, a quarterly released newsletter to keep the audience informed on better internet issues, "[t]he knowledge hub, a central access point for information, evidence, and policy insights on the impact of digital transformations on the lives of children and young people in the EU, Iceland, and Norway." (Better Internet for Kids, w. d.), learning corners, different resources for parents, caregivers, teachers, and educators, events and campaigns, and the BIK Youth programme, that aims to involve young people in discussions (Better Internet for Kids, w. d.).

7 Summary, Discussion and Outlook

The main aim of this report was to examine the affect of gaming, social media and role models on young European adults with learning disabilities. As research has shown, only little is known about the online behaviour of this specific target group. However, it can be assumed that the user behaviour is similar to that of adolescents without a disability as the internet became a rural part of our everyday lives. Nevertheless, there is a higher risk for young people with disabilities of being excluded from online activities be it because of the characteristic of being disabled or because of protective parents or caregivers.

There exist only a few programmes that train youth with disabilities on how to behave on the internet and how to create a safe online space. A wider range or more accessibility of those programmes would be preferable. There should be also guidelines for parents and caregivers on how to teach their children a safe online handling. As Chadwick (2019) has pointed out: the supervision and monitoring of the internet use of people with disabilities isn't purposeful as those children don't get the chance to learn to

[1] ID is the abbreviation of intellectual disability

cope with several risks. The “[…] exposure to opportunities brings exposure to increased risk and efforts to reduce risk may concurrently reduce opportunities. Exposure to more risks did not always lead to greater harm.” (Dr. Chadwick, 2019, p. 6). All in all, it might be difficult to do justice to all different kind of learning disabilities but there should at least be an effort to make the online world a safe space for every adolescent with or without a disability and therefore to promote inclusion.

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