TikTok as an Educational Platform: Teenagers’ Experiences

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Abstract: TikTok as social media in general has a controversial reputation and its academic potential is not much explored. Nowadays TikTok is extremely popular among teenagers for entertainment purposes and its popularity is constantly growing. The platform’s short-length videos are delivering small and easily digestible pieces of information that are potentially suitable for attracting and capturing student attention. They deliver information in a concise manner, which could be useful for various school subjects. The aim of our study is to find out whether teenagers use the platform for education and how they evaluate the platform’s academic potential. We asked 34 teenagers (M=15.59, SD=1.76, 59% female), who attend various grammar schools in Germany, about their use of TikTok and their perception of the platform’s educational potential. The results show that those teenagers who use TikTok also consume school-relevant content from the platform, such as learning methods, physical explanations, mathematical tricks, astronomy and biology facts. Those who consider the platform helpful for learning highlight two main reasons: the speed and ease of access to information and the brief and easy-to-understand content. However, the teenagers also point out two main problems regarding the use of TikTok for learning: its high level of distraction and the absence of information about sources. Though the majority consider the platform as a purely entertaining medium, 44% of teenagers think that it can be used both for entertainment and education. 29% of teenagers consider TikTok to have a potential to be a supplementary educational medium. Teenagers suggested the following improvements for TikTok to make it more effective as an educational tool: mark credible sources and reliable information, create separate space for learning for instance through filters or special settings, create more reliable educational content, make the platform safer and less distractive. The captivating nature of TikTok is a double-edged sword: it can spark interest in complicated topics, but it also tends to draw attention to irrelevant content.

Keywords: TikTok use, Academic potential of TikTok, Teenagers’ use of social media, Educational platform, Addictive behaviour

1. Introduction

TikTok is one of the most popular social media platforms nowadays. Since its market entry in 2016, TikTok has gained global popularity and, according to Statista (Statista 2024), it had more than 830 million active users worldwide in 2023. The short-form videos that users can create, watch and share on the platform are extremely attractive for the younger generation. According to Business of Apps (Business of Apps), TikTok’s worldwide age demographics reveal that 14.4% of platform users are between 13 and 17 years old, while 34.9% are between 18 and 24 years old.

While some users share funny moments and jokes, business companies use the platform to promote their products. But in recent years, TikTok platform has gained attention for its far less obvious content - educational videos. According to Study.com (Study.com), in a survey of 1,000 US-American users, one out of four utilized the platform for educational purposes. Among these users, 69% reported that TikTok videos helped them complete their homework or homework of their kids. They claim, “with TikTok’s plethora of accessible, easy-to-understand video content, the platform is becoming a treasure trove of supplemental educational material” (Study.com).

The education potential of social media, both in general and on some specific platforms, has already attracted significant attention from researchers (van den Beemt et al. 2020; Al-Qaysi et al. 2023; Chugh und Ruhi 2018). A systematic review of 713 studies on social media adoption revealed that most studies collected data from students in business disciplines, with Facebook being the primary application used for educational purposes in the majority of studies (Al-Qaysi et al. 2023). Facebook, especially in higher education context, has been extensively studied (Chugh und Ruhi 2018; Davidevitch und Belichenko 2018). Twitter has also been widely researched, with findings highlighting its potential to enhance student’s learning capabilities, improve their motivation and engagement (Evans 2014; Feito und Brown 2018; Malik et al. 2019). These studies suggest that social media can positively contribute to teaching and learning processes. However, the educational potential of TikTok’s and the acceptance of this platform for educational purposes remain relatively unexplored.

TikTok has gained a controversial reputation and faced restrictions and bans in the whole range of countries due to privacy, cybersecurity concerns, and malicious content (Mashable 01.12.2023). Despite these issues, some teachers were found to use TikTok in classrooms in order to enhance learning experience, and articles...
discussing the effectiveness of TikTok for educational purposes have appeared (Escamilla-Fajardo et al. 2021; Gao et al. 2023; Fowler et al. 2022). It was argued that creating and delivering learning content using TikTok could benefit pedagogical methodologies based on nano-learning principles – condensing of micro-content into small units (Khlaif and Salha 2021). A study exploring TikTok’s impact in a corporal expression course revealed that TikTok can help to create a motivating learning environment for students, enhance their creativity and curiosity (Escamilla-Fajardo et al. 2021). Another study investigated TikTok’s efficacy as a video aid for education to improve learning motivation and oral proficiency among learners (Gao et al. 2023). TikTok has also been recognized as a suitable platform for providing easy-to-digest educational information for students, such as in radiology education (Kauffman et al. 2022), and to address gaps and shortcomings in traditional education, such as providing sexual health information to adolescents in the US as part of sex education (Fowler et al. 2022). Authors assessing TikTok’s suitability for radiology education argue that it should not be “summarily dismissed as a silly dancing app” and emphasise its potential to reach a substantial audience, especially those on the early stages of medical education (Kauffman et al. 2022). While TikTok’s use in higher education has already received some attention, its potential as an educational platform among 13-17 year old adolescents, who constitute a significant portion of its user base (Business of Apps), remains relatively unexplored.

The objective of our study is to determine whether teenagers use the platform for educational purposes and to assess how they perceive the educational potential of TikTok. We focus on 14–16-year-old teenagers in Germany. In 2022, TikTok’s penetration rate in this country was already 33.6% of Internet users (Statista 2023a). Moreover, the majority of TikTok users in Germany were found among 14-19 year old adolescents, with almost 56% stating that they used the platform (Statista 2023b).

2. Methodology

For this study, we made a survey with 34 teenagers who applied for the adventure education programme “Classroom under Sails” (M=15.59, SD=1.76, 59% female). The participants came from eight out of sixteen regions of Germany. We asked teenagers about their social media use at the end of September 2023 (before the program). Data were collected through the online survey platform SoSci Survey, and teenagers had ten days to respond to our questions at their convenience. We asked teenagers several general closed questions on their TikTok use (e.g., “How often do you use TikTok?” with answer options from “never used” to “several times per hour”) and six open questions regarding teenagers’ attitudes towards TikTok’s use for education (for more details, refer to the results section). The collected data showed no missing values, as all teenagers provided answers to our questions. Responses to open-ended questions varied in lengths from one to eighty words.

3. Results

In our sample, 21% of teenagers (four boys and three girls) reported using TikTok. 11.8% (two boys and two girls) reported using it multiple times a day.

Our questions and teenagers’ answers are presented in Table 1. According to teenagers’ responses, 9% of all teenagers apply it to learn a new subject that was not enough covered in school. 12% of all teenagers agreed that TikTok has helped them to understand better certain content, concepts, or subjects, and one girl has already used TikTok to do her homework.

15% of all teenagers reported that they spoke to a teacher about the educational content on TikTok, and 32% talked to other students about the educational content on the platform. One girl reported that a teacher used or recommended educational content on TikTok.

Table 1: Teenagers answer about their use of TikTok

<table>
<thead>
<tr>
<th>Topics</th>
<th>Questions</th>
<th>N of positive answers among teenagers</th>
<th>...girls</th>
<th>...boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>TikTok education</td>
<td>Have you ever used TikTok to learn a new subject that was not enough covered in school?</td>
<td>9%</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Have you ever used TikTok to do homework?</td>
<td>3%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Do you think TikTok has helped you to better understand certain content, concepts or subjects?</td>
<td>12%</td>
<td>15%</td>
<td>7%</td>
</tr>
<tr>
<td>TikTok</td>
<td>Have you ever spoken to a teacher about the</td>
<td>15%</td>
<td>20%</td>
<td>7%</td>
</tr>
</tbody>
</table>
We asked teenagers six open-ended questions regarding their use of TikTok and their perceptions of TikTok as an educational platform. The teenagers’ answers are presented below.

3.1 What Educational Content or Learning Videos Have you seen on TikTok?

The results indicate that teenagers who use TikTok also consume school-relevant content from the platform: learning methods, physical explanations, legal topics, astronomy and biology facts, and financial tips. As one girl reported: “I once read a book about astronomy/physics. Later, I discovered that the author also creates TikTok content. I find his videos enlightening”. Several teenagers mentioned using TikTok for learning tips, such as drama analysis.

Teenagers also use TikTok for obtaining qualitative news information. One girl wrote: “I found some math explanation videos on TikTok very helpful. Additionally, I enjoy watching TikToks from “Funk” or “Tagesschau””. Funk is a German video-on-demand service operated by the public broadcasters ARD and ZDF and targeting people between the age of 14 and 29 (Funk.net 2024). Funk produces over 70 programs for social media platforms, including TikTok, Snapchat, YouTube, etc., focusing on information and entertainment. “Tagesschau” is a the oldest and most watched news service in Germany, a part of the public-service TV network ARD (Tagesschau.de 2023).

3.2 How do you Find TikTok Helpful for Your Learning?

Here, 47% of teenagers consider TikTok platform to be unsuitable for learning, 29% are unsure as they do not know the platform well enough, 12% find it “partly helpful”, and 12% consider it helpful. Among users, more than half find it helpful.

Teenagers who consider TikTok helpful highlight two main reasons. The first is the speed and ease of access to information: “Very important because one quickly receives the important information”. The second is the brief and easy-to-understand content: “I find that it is helpful for fundamentals”, “Short explanation videos that summarize the content very briefly and comprehensibly”, “I find TikTok partially helpful since videos on educational topics provide assistance and are summarized briefly”.

Those teenagers who are sceptical about TikTok’s potential point out two main shortcomings. The first one is its distraction potential: „When you open it, you end up watching just one more video, and in the end, you’ve learned almost nothing”, “There is a significant distraction factor on TikTok”, “TikTok also displays many purely entertaining videos”. The distraction factor is also the main reason why some teenagers avoid using the platform: “I don’t have TikTok, but I believe that TikTok is not the right platform for learning because one easily gets distracted”, “I don’t have TikTok. Not helpful – it just creates addiction”. The reputation of TikTok as an addictive platform stops some teenagers from using it, although one boy mentioned that he, to the contrary, finds TikTok helpful for improving his concentration abilities.

Another point of criticism is the absence of proper sources: “I find TikTok to be not very helpful for learning, as it does provide a vast source of information, but often lacks proper sources”.

3.3 Do you think TikTok is to be Taken Seriously as a Platform for Knowledge Exchange and Educational Content, or do you Perceive it More as a Purely Entertainment Medium?

Teenagers, both users and non-users, have a clear vision on this topic: here, the majority (47%) think that TikTok is a pure entertainment medium, whereas 44% think that it can be used both for entertainment and education. Interestingly, the proportion is similar between users and non-users. Only two teenagers (non-users) answered that they are uncertain as they do not use TikTok.

Here, teenagers again point out the deficits of the platform. The main obstacle is the platform’s goal to capture users’ attention for a long period of time. As one girl, a regular TikTok user, puts it: “I think that theoretically, it could also be used as an educational platform. However, I believe that the concept of TikTok is
not necessarily well-suited for that, as the app is designed for users to spend as much time as possible, and I think it’s easy to get distracted”. There is a skepticism about the platform goals: “I don’t see TikTok as an educational platform! TikTok provides everyone a space to share their knowledge, but ultimately, TikTok is about money and how much time you spend on the app, not about what you learn during that time.” There is a clear vision that a boy, who uses TikTok multiple times a week, describes: “I believe TikTok has potential, as short videos are a great way to engage students and deliver content. However, the algorithm would need to prioritize less entertainment-focused videos for this purpose”. A non-user girl explains it like this: “I see it more as a pure entertainment medium. However, if changes were made, such as only receiving educational videos on a specific topic when in learning mode, I would find it beneficial.”

Another important point, already mentioned in the previous section, is the transparency of the sources of information. The reputation and trustworthiness of information producers are especially important: “It depends on whether the people whose videos you watch are reputable and trustworthy”, „It depends on individual accounts. There are reputable information channels on TikTok, but there are also trolls, conspiracy theorists, and people spreading (populist) misinformation. I believe the second group prevails because it's favoured by the algorithm”, “I consider educational content on TikTok to be less credible because for most individuals, the main focus is on gaining reach and many views. You often get more clicks by addressing an interesting topic, even if it involves spreading false information”.

Another problem is the absence of control over the accuracy of information: “There is no control over the accuracy of the information, and there's a tendency to simply accept it as “true.””; “One should double-check all information to ensure its accuracy”. One boy summarizes: “Short video platforms are to be taken seriously as they provide access to knowledge for many people who might not seek information through traditional media. However, there are also many misinformation, sometimes malicious or just for fun, that one may not easily distinguish from genuine news”.

3.4 How do you Assess the Credibility and Accuracy of Educational Content on Tiktok Compared to Traditional Educational Sources?

Here, 62% of teenagers consider TikTok videos less credible than traditional educational sources, and 15% do not have a specific opinion on this topic. Teenagers report: “I think that a lot of fake news is spread on TikTok <..> I believe this is not the case with traditional educational sources, as they provide references, and the information is typically reviewed before publication”. They note, “many things are simply asserted, so one cannot easily believe it. In traditional educational sources, sources are usually provided, and the content is officially reviewed before publication. They are credible”. Additionally, „TikTok lacks an efficient control mechanism against fake news, hate, and populism. Publishers, newspapers, and broadcasters have such mechanisms, which usually work efficiently.”

At the same time, 24% of teenagers provide a differentiated picture, where the trustworthiness of TikTok videos depends on two main factors. The first one is the source and author of information: “I find it very credible with channels like Tagesschau, but with unknown channels, not so much”. Another user notes, “Individual users provide sources in their videos, which can be relatively easily checked, making the users more trustworthy”. The second factor is the content type and addressed topic: “I find educational videos mostly trustworthy; people have no reason to spread misinformation about math equations.”

3.5 What Improvements or Features Would you Wish for Tiktok to Make it More Effective as an Educational Tool?

Two thirds of teenagers clearly expressed their wishes and explained how they would like the platform to be. Only one-third of teenagers (34%) reported having no clear opinion on this topic, and one user expressed the opinion that TikTok should not become an educational platform.

Teenagers suggested the following improvements for TikTok to make it more effective as an educational tool (several teenagers mentioned more than one topic in their answers):

- Mark credible sources and reliable information (24%): “become more credible”, “more credible sources”; “There should be more transparency regarding used sources, for instance, by providing the option to view the sources used in a video”, “highlighting particularly helpful and credible videos/channels”, “I would fundamentally redesign TikTok so that only qualified individuals can share their knowledge”. Teenagers also suggest possible information labelling: “a kind of quality control, conceptually similar to a blue checkmark on Twitter/X”; “authentication for reputable channels”,
“...that there's somehow a distinction, marking what is genuinely academic and meant for learning, and what is not”.

- **Create separated spaces for learning for instance through filters and/or learning settings (21%)**: “A space for school-related things and a space for leisure”; “To be able to filter specifically for learning content”; “A setting to hide entertainment videos and only display videos with educational content”; “I would wish for the ability to set it to only see educational videos on a specifically chosen topic”; “An additional learning setting that, with a code, blocks all other videos”, “One should be able to filter reels on specific topics like education to consume genuinely informative content”, “Optional deactivation of the algorithm to avoid getting stuck in one’s own filter bubble during research”.

- **Create more educational content (18%)**: “more topics and knowledge”, “educational videos”, “permitting longer videos”, “More serious videos, it’s always very provocative”, “avoiding censorship and discrimination against topics they might disagree with, such as queer issues”.

- **Make the platform safer (15%)**: “addressing hate, misinformation, and populism”, “make it safer”, “more consistent action against misinformation”, “create a better system to detect fake news”, “the company should take stronger measures against misinformation”.

- **Make the platform less distractive (12%) “less distraction”; “implementing a limit to endless scrolling”, “make it less addictive”**.

### 3.6 Do you Think TikTok has the Potential as a Supplementary Educational Medium? In What Ways?

The majority of teenagers (59%) answer “no” and “not in its current form” because of distraction, harmful content and the power of algorithms. As one male user summarises it: “I think TikTok has less potential, as it primarily serves for entertainment for most people and also contains potentially harmful content. The operators would need to make efforts to shift from entertainment to educational videos; otherwise, TikTok has no potential as an educational medium”. “I believe that the concept of TikTok is not necessarily well-suited for it, as the app is designed for users to spend as much time as possible, and I think it’s easy to get easily distracted.” A female non-user: “The idea of short videos with a concise opinion is good, but not when the algorithm only suggests opinions tailored to an individual”. Another female non-users also considers TikTok not suitable as an educational medium, but they point out: “I would find a platform similar to TikTok good, but one where only verified educational content is provided”; “Perhaps not TikTok specifically, as it tends to focus more on entertainment. However, digital media, in general, has a chance, as many students find it more engaging and interesting to work with, making them more motivated to learn compared to traditional educational media.”

Whereas 12% do not have a special opinion, 29% consider TikTok to have a potential to be a supplementary educational medium: “I believe TikTok has potential, as short videos are a great way to reach students and convey content to them”, “as general basics for ideas and initial information, it would be very helpful. However, one should also learn from school or oneself how to handle it”; “I think one could orient oneself towards TikTok in terms of the shortness of the videos. This way, one could make education more interesting for teenagers through very short videos”, “Yes, if the information comes from reputable individuals who consistently post the truth”.

### 4. Discussion

In our study, 21% of teenagers reported using TikTok, which aligns with findings from a representative German-wide study indicating that 28% of girls and 22% of boys aged 12 to 19 in Germany stated using the platform in 2023 (Feierabend et al. 2023). One of eight teenagers agreed that TikTok has helped them better understand certain content, concepts, or subjects, with one girl even using TikTok for her homework. One out of three teenagers talked to other students about the educational content on the platform. Teenagers reported consuming school-relevant content from the platform including learning methods, physical explanations, mathematical tricks, legal topics, astronomy and biology facts, and financial tips. It is noteworthy that 9% of all teenagers in our sample, though they reported not using TikTok, mentioned utilizing TikTok videos for learning purposes, such as accessing new methods and physic-related information. One non-user girl also noted that TikTok is used during lessons at her school to initiate discussions. This suggests that some teenagers engage with the platform content without creating profiles; they report being non-users but still watch TikTok videos. This fact could contribute to clarifying the penetration rate discrepancy, as Statista reported 56% of 14 and 19-year-old TikTok users (Statista 2023b).
In our study, 47% of teenagers perceive the TikTok platform unsuitable for learning, while 24% find it either “partly helpful” or “helpful” for learning purposes. Similarly, 47% view TikTok solely as a medium for entertainment, while 44% believe it can serve both entertainment and education purposes. Interestingly, this proportion remains consistent between users and non-users.

Those who consider the platform as beneficial for learning emphasize two main reasons: the speed and ease of accessing information, and the brief and easy-to-understand content. Short, engaging, and entertaining videos, along with the opportunity to be creative and the sense of community they foster, are the main ingredients driving the platform’s strong appeal among younger audiences. TikTok is regarded as “the mirror of a generation” (Cervi 2021), and “a valuable window into youth experience and cultural production” (Stahl und Literat 2023). The platform’s easily understandable and digestible pieces of information have the potential to serve as a powerful learning tool, utilizing its high appeal for educational purposes.

However, teenagers highlight two primary concerns regarding the use of TikTok for learning: its high potential for distraction and the lack of transparency concerning the credibility of sources. The platform’s primary monetary-driven goal to capture users’ attention for as long as possible poses a major obstacle to effective learning. This distraction potential and the platform’s reputation as an addictive medium, driven by powerful algorithms designed to maximize engagement, is a key reason why some teenagers opt to avoid using it.

The second issue concerns the accuracy of content and the lack of source transparency. It is uncertain whether specific TikTok videos provide reliable information or are misleading. While 62% of teenagers perceive TikTok videos as less credible than traditional educational sources, 24% take a differentiated approach and assess the trustworthiness of TikTok content based on two key factors: the credibility of the source, and the nature of the topic being addressed. Here, they find mathematical equations less susceptible to misinformation. The credibility of the source is extremely important, as the majority of content on the platform is user-generated, with only a small part produced by private or public entities, such as Funk in Germany, or marketing companies promoting their products. Researchers examining sexual education videos on TikTok note that not all videos provide factual information, they highlight that the platform does not “regulate or oversee the content or provide disclaimers about misinformation or unverified claims” beyond moderating explicit inappropriate content (Fowler et al. 2022). This issue extends beyond sexual education, and is important to all educational content on the platform. There should be a possibility to meet teenagers’ informational and educational needs in a safer way. Though specialists try to counteract misinformation, “the ever-growing quantity of content available on TikTok makes responding to all misinformation impractical, and there is no guarantee a user will ever encounter these corrective videos.” (Fowler et al. 2022).

The majority of teenagers, both users and non-users, have a clear vision on how they would like TikTok to change to be more suitable for their educational needs. In enhance platform’s suitability for learning, several changes could be implemented to make TikTok more effective as an educational tool: marking credible sources and reliable information to ensure transparency and trustworthiness, creating separate learning spaces or introducing filters to facilitate learning environment, increasing the availability of educational content suiting to diverse learning needs, improving platform safety measures and reducing distractions to create a suitable learning environment. In its current state, 29% of teenagers recognize TikTok’s potential as a supplementary educational medium, while the majority (59%) view it as unsuitable due to above mentioned limitations. By addressing these concerns and implementing suggested improvements, TikTok could potentially evolve into a more effective educational medium.

5. Conclusions and Limitations

Our study revealed that teenagers who use TikTok also consume school-relevant content from the platform. Those who consider the platform helpful for learning highlight two key reasons: the speed and ease of access to information and the brief and easy-to-understand content. However, the teenagers also point out two main problems regarding the use of TikTok for learning: its high level of distraction and the lack of transparency of sources. Though the majority consider the platform as a purely entertaining medium, 44% of teenagers think that it can be used both for entertainment and education. However, as in its current form only 29% of teenagers consider TikTok having a potential to be a supplementary educational tool. In order to make TikTok more suitable for learning, the following improvements are suggested: mark credible sources and reliable information, create separate space for learning for instance through filters or special settings, increase the availability of reliable educational content, improve platform safety measures and reduce distractions to create a suitable learning environment.
Our study has some limitations. The sample size of 34 teenagers, comprising both users and non-users, is relatively small. A study with more representative sample would be beneficial to provide insights to teenagers’ actual use of TikTok for education purposes. Additionally, our assessment relied on self-reported data from teenagers, which may not fully reflect their actual usage patterns.

Our research highlights TikTok’s considerable potential as an engaging educational tool for teenagers. However, it faces two primary challenges. The first one lies in balancing educational content with entertaining distractions. The algorithms driving user engagement often lead teenagers to stray from their intended focus, deterring some from using the platform for learning purposes. The second challenge involves ensuring the credibility of content and sources. The solution could be the development of a separate service or space on TikTok offering short, informative videos with entertaining elements, specially tailored for educational purposes. This service could be than utilized in schools without concern that students will drift off-topic, and meet teachers’ worries about being perceived as too progressive or too careless. It could also serve as a valuable resource for teachers to explain teenagers complex topics and wake up their interest, both in classroom and at home. Additionally, such a service could address parents’ concerns about possible media addiction by providing secure educational space. Another possibility is implementing easy-to-use filters designed to filter educational content for students, although the effectiveness and feasibility of such filtering mechanisms and possible labelling would require profound assessment.

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