

# **DIGITAL LITERACY AND SOCIAL CHANGE: THE IMPACT OF ONLINE LEARNING PLATFORMS ON THE SOCIAL INTERACTIONS OF YOUNG PEOPLE IN THE UK**

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## **Abstract**

The development of digital technology has transformed the way adolescents learn and interact socially, particularly through the use of online learning platforms. This study aims to explore the influence of digital literacy on the social interactions and well-being of adolescents in the UK, and to analyze the role of digital literacy as a mediator in mitigating the negative impacts of online learning. The research approach used was qualitative, with data collection methods consisting of semi-structured interviews, participant observation, and documentation from adolescents aged 13–18 in several UK secondary schools. The results show that digital literacy levels influence adolescents' ability to use online platforms effectively and determine the quality of their online and face-to-face social interactions. Adolescents with high digital literacy are able to collaborate, communicate, and manage screen time healthily, thus maintaining emotional well-being. Conversely, low digital literacy can potentially lead to technical difficulties, social isolation, and digital stress. These findings emphasize the importance of digital literacy development strategies, integration of online and face-to-face interactions, and socio-emotional support to optimize the benefits of online learning for adolescents' social development. This study contributes to the understanding of the relationship between digital literacy, online learning, and adolescents' social well-being, while also providing a basis for recommendations for balanced digital-based education policies.

**Keywords:** Digital Literacy, Online Learning, Adolescent Social Interaction, Adolescent Well-being and Digital Education

## **INTRODUCTION**

The development of digital technology has transformed nearly every aspect of modern society, including education. In the UK, the increased use of online learning platforms has become increasingly visible, especially since the COVID-19 pandemic, which forced schools and educational institutions to adopt distance learning methods. Platforms such as Google Classroom, Microsoft Teams, and Zoom have become the primary medium for teachers and students in conducting the teaching and learning process. This transformation has not only affected how adolescents acquire knowledge but also their social interaction patterns. Digital literacy, which encompasses the ability to access, assess, and use information effectively through digital media, has become a crucial skill for adolescents. Mastering digital literacy allows them to adapt to the demands of online education, but on the other hand, it has reduced face-to-face social interactions, previously a crucial part of adolescents' social development. Several studies have shown that reliance on online platforms can lead to challenges, such as social isolation, reduced interpersonal communication skills, and changes in how social networks are formed. Furthermore, online learning platforms have become not only educational tools but also new social spaces for adolescents. They develop digital identities, form virtual communities, and interact through text, video, or social media integrated with online learning. This phenomenon raises important questions: to what extent can digital literacy facilitate healthy social interactions, and how the shift to online learning affects the quality of social relationships among British adolescents. This study aims to explore the impact of online learning platform use on

the social interactions of adolescents in the UK, as well as to understand how digital literacy mediates the social changes that occur. This research is expected to provide insights for educators, policymakers, and parents in designing learning strategies that are not only academically effective but also support adolescents' overall social development.

Table 1. Digital Usage Data by Teenagers in the UK

Aspects of Digital Usage	Key Findings
Internet Access	100% of teenagers aged 12–15 use the internet; 96% have their own mobile phone
Social & Online Digital Media Exposure	The majority of teenagers actively use online platforms such as YouTube and social media, exceeding their use for formal learning.
The Relationship Between Digital Literacy and Mental Well-Being	From a survey of 7,494 adolescents (11–16 years old), 30.2% of adolescents with high digital literacy had high mental well-being, compared to 11.6% with low digital literacy.

Source: Cambridge Assessment / Ofcom

The data in Table 1 shows that adolescents in the UK have near-universal digital access, with all 12–15-year-olds using the internet and the majority owning personal devices such as mobile phones. This provides an important basis for this research, as online learning platforms have become an integral part of their learning experience, leading to a shift in adolescents' social interactions into the digital realm. Beyond access, high exposure to social and online digital media indicates that adolescents' interactions occur not only in online classrooms but also through social media and video platforms. This phenomenon opens up opportunities for adolescents to develop digital identities and form new social networks, while also presenting challenges such as reduced face-to-face social interactions. Furthermore, data on the relationship between digital literacy and mental well-being indicates that adolescents' ability to use digital platforms effectively (digital literacy) not only impacts academic achievement but also their social and emotional well-being. In the context of this research, this is relevant because digital literacy can act as a mediator in minimizing the negative impact of online learning on social interactions. Adolescents with high digital literacy are likely better able to navigate online interactions healthily and maintain positive social relationships. Intense internet use among British adolescents has significant social impacts, both positive and negative. A UK legislative report noted parental concerns about children's screen time and its effects on development and well-being. While this report did not specifically highlight online learning platforms, the findings provide important context for how digital interactions can impact adolescents' social lives more broadly (UK Parliament).

Furthermore, a survey by the British Standards Institution revealed an interesting phenomenon related to teenagers' perceptions of their digital experiences. As many as 46% of teenagers aged 16–21 would prefer to live without the internet, while 68% felt that online time had a negative impact on their mental health (The Guardian). These findings suggest that while the internet and online learning provide widespread access to education and social media, the intensity of use can lead to negative perceptions regarding social interactions and psychological well-being. In the context of this research, this is relevant because online learning not only changes learning patterns but also affects the quality of social relationships and social experiences of teenagers. Furthermore, a Vodafone report estimates that British teenagers can spend up to 4 hours per day on screens during the holiday period, and parents are concerned that this could impact social connections, sleep, and physical activity (The Scottish Sun). This data highlights the trade-off between digital benefits and the socio-emotional risks that arise from intense use of online platforms. In other words, online learning can be an effective educational tool, but if it is not balanced with offline social interactions, teenagers can potentially experience social isolation, decreased interpersonal relationship quality, and digital stress.

The rapid changes in the educational landscape due to advances in digital technology have created an urgent need to understand the social impacts of online learning on adolescents. In the UK, the use of online learning platforms has become an integral part of the education system, particularly following the COVID-19 pandemic. While online learning offers flexibility and greater access to knowledge, it also poses significant social challenges, such as reduced face-to-face interactions, the risk of social isolation, and changes in adolescents' interpersonal communication patterns. Data shows that nearly all British adolescents have internet access and personal digital devices and spend significant time online. However, this intensity of digital use is also associated with decreased mental well-being and parental concerns about their children's social development. Surveys reveal that a majority of adolescents perceive the negative impact of high screen time on their mental health and social relationships. This phenomenon highlights that digital literacy—the ability to access, evaluate, and utilize digital information wisely—is a key factor in determining whether online learning is beneficial or poses social risks. By linking these findings to research, it can be concluded that the impact of online use on adolescents' social lives is a complex phenomenon. This study seeks to explore how online learning platforms influence the social interactions of adolescents in the UK, as well as the role of digital literacy in mitigating negative impacts while maximizing the benefits of online learning. By understanding these dynamics, educators and parents can design online learning strategies that focus not only on academic aspects but also support adolescents' social development and emotional well-being.

### **Identification of problems**

Based on the background and supporting data, several problems that arise regarding the use of online learning platforms and digital literacy among British teenagers can be identified as follows:

1. Changes in social interaction patterns:
  - a) Teenagers spend most of their learning time through online platforms, which can reduce face-to-face interactions with peers and teachers.
  - b) The intensity of use of social digital platforms and online media can influence how teenagers build and maintain interpersonal relationships.
2. Digital literacy gap:
  - a) Digital literacy levels vary between individuals, which impacts adolescents' ability to utilize online learning platforms effectively.
  - b) Low digital literacy can cause difficulties in participating in online learning and increase the risk of social isolation.
3. Impact on mental and social well-being:
  - a) Excessive online use can lead to digital stress, anxiety, and negative perceptions of social interactions.
  - b) Parents' concerns about children's screen time highlight the potential social and emotional risks.
4. Lack of understanding of the relationship between digital literacy and social interaction:

There is no comprehensive understanding of how digital literacy can mediate the impact of online learning on the social interactions of young people in the UK.

### **Formulation of the problem**

Based on the problem identification above, the formulation of the research problem is as follows:

1. How do young people's digital literacy levels in the UK affect their ability to use online learning platforms?
2. How does online learning impact the social interactions of young people in the UK, both in face-to-face and online contexts?
3. Can digital literacy be a factor that mediates the negative impact of online learning on social interactions and adolescent well-being?
4. What strategies or approaches can be implemented to optimize the use of online platforms to support the social development and well-being of adolescents?

## **LITERATURE REVIEW**

### **2.1 Digital Literacy in Adolescents**

Digital literacy has become a key skill in the 21st century, especially for adolescents living in a digital learning and communication environment. Smith & Jones (2025) define digital literacy as the ability to access, evaluate, use, and create digital content effectively, including critical evaluation skills for online information in online learning and social media. Their research emphasizes that digital literacy is not just technical skills, but also reflective and critical skills in dealing with complex digital contexts. In the context of digital health, Levy et al. (2022) in their study of digital health literacy in adolescents showed that digital literacy levels determine how adolescents search for, assess, and use online information, especially when that information has social and health consequences. These skill deficiencies can make adolescents more vulnerable to misinformation and negative social influences.

### **2.2 The Influence of Digital Platforms on Teenagers' Social Interactions**

Digital media and online learning platforms have revolutionized the way teenagers interact, both in educational and social contexts. Orben (2025) states that the relationship between device use and adolescent well-being is complex and non-linear: while technology can provide social and informational access, excessive use can negatively impact interpersonal relationships and mental well-being. This suggests the need for more in-depth research to empirically understand this relationship among British adolescents. Meanwhile, a large study, Youth Wellbeing, Digital Use, and Digital Literacy, by Cambridge Assessment (2022), found that adolescents' digital use is associated with aspects of their well-being and life satisfaction; this relationship is not necessarily positive or negative, but is influenced by individual characteristics and internet usage patterns. These findings confirm that digital use patterns can impact adolescents' social relationships and well-being, depending on the context and intensity.

### **2.3 The Role of Social Media in Teenage Interactions**

Social media has become an integral part of adolescents' social lives in the digital age. In their study of adolescents' experiences on social platforms, Alluhidan et al. (2024) found that although many adolescents use social media to connect and seek social support, a significant number of shared experiences also include negative aspects such as adverse experiences or social pressure, demonstrating the duality of social media's effects on adolescents' social interactions. This research is relevant because in the context of online learning, social media platforms often remain the primary social interaction space for adolescents, which can strengthen social relationships or conversely lead to less beneficial effects depending on how they use them.

### **2.4 Digital Literacy Gap and Its Impact**

Digital literacy is also often associated with resilience to digital risks such as exposure to harmful information, misinformation, and mental health. Hassoun et al. (2024) stated that an approach focused on building digital resilience—the ability to minimize and manage digital risks through critical and social skills—is more effective than simply restricting content or censoring. They emphasized that adolescents process online information socially and collaboratively, so a digital literacy approach must address these social dynamics in online interactions. This construct demonstrates that digital literacy determines not only adolescents' technical abilities but also the quality of their social interactions in the context of online learning and social media use in general. Strategies to improve digital literacy need to consider the social and cultural factors that influence how adolescents interact and socialize in digital environments.

## **METHOD**

### **3.1 Research Approach**

This study uses a qualitative approach to explore in-depth the experiences, perceptions, and social meanings experienced by adolescents in the UK regarding the use of online learning platforms and changes in their social interactions. According to Bhandari (2025), qualitative research is a

methodology that aims to understand the concepts, opinions, or experiences of research subjects through non-numerical data such as text, audio, or interviews, making it appropriate for exploring the "how" and "why" of social phenomena in the context of the subjects' real lives.

### **3.2 Research Design**

This research design is a descriptive qualitative study, in which the researcher attempts to describe the social phenomena of online education and social interactions in a holistic and natural way. A qualitative design was chosen because it aligns with the nature of social research, which focuses on the subjective experiences of participants and the complex context of digital culture, rather than simply quantitative measurements.

### **3.3 Research Location and Informants**

The research was conducted in several secondary schools in the UK that implement online learning as part of the formal curriculum. Informants were selected using a purposeful sampling technique: adolescents aged 13–18 who actively use online learning platforms and educators directly involved in the digital learning process. This technique aligns with the principles of qualitative research, which selects participants based on their relevance to the phenomenon under study, rather than statistical representation.

### **3.4 Data Collection Techniques**

Some qualitative data collection techniques used in this study are:

1. **Semi Interview-Structured**  
Researchers conducted in-depth interviews with participants to gain personal perspectives on their online learning experiences and their impact on their social interactions. In accordance with the principles of qualitative interviews, the semi-annual type-Structured interviews provide space for informants to freely express their experiences but remain focused on the research topic.
2. **Participatory Observation**  
Observations are conducted during online learning sessions or online social interactions to understand the dynamics of direct interactions, both in the context of learning and communication between adolescents. Observational methods in qualitative research are useful for capturing real-life behaviors and nuances of social interactions that might not be revealed through interviews alone.

### **3.5 Research Instruments**

The primary instruments of this research were an interview guide and observation notes developed based on concepts of digital literacy and social interaction in academic literature. The guide included open-ended questions to prompt reflective responses from participants about their online learning experiences, their digital skills, and its social impact.

### **3.6 Data Analysis**

The data was analyzed qualitatively thematically with the following steps:

1. Transcription of interview and observation data.
2. Data reduction to focus on key themes such as experiences of using online platforms, changes in social interactions, and the influence of digital literacy.
3. Data coding to group information according to themes.
4. Synthesis to compile an integrated and meaningful narrative of research results.

This approach aligns with the principles of qualitative research which prioritizes a deep understanding of the social meanings that emerge from participant data (interview results, observations, documents) in their natural context.

### **3.7 Data Validity and Validity**

Data validity was tested using data source triangulation techniques, which compare information obtained from interviews, observations, and documentation to ensure the consistency and reliability of the findings. This was done to reduce researcher bias and strengthen the credibility of the research results.

## **RESULTS AND DISCUSSION**

### **The digital literacy levels of teenagers in the UK influence their ability to use online learning platforms**

The digital literacy level of adolescents in the UK plays a crucial role in their success in using online learning platforms. According to Smith & Jones (2025), digital literacy encompasses the ability to access, assess, understand, and utilize digital information effectively. With high digital literacy, adolescents are able to navigate various features of online learning platforms, understand instructions and learning materials, and utilize digital media to optimally collaborate with peers and teachers. Research by Levy et al. (2022) shows that adolescents with good digital literacy skills are better able to utilize technology for learning activities, such as independently uploading assignments, accessing additional learning resources, and participating in online discussions. They also tend to be more critical of the information they receive online, distinguishing relevant content from invalid or misleading information. Conversely, adolescents with low digital literacy often experience difficulties navigating platforms, accessing materials, or interacting with teachers and peers. This can result in decreased motivation to learn and limited participation in the online learning process.

In addition to technical skills, digital literacy is also related to digital social skills. Hassoun et al. (2024) emphasize that good digital literacy enables adolescents to interact effectively in online learning spaces, maintain ethical communication, and manage social conflicts that arise in online forums. In other words, digital literacy is not just technical skills, but also socio-cognitive abilities that support interaction and collaboration in digital environments. Thus, it can be concluded that digital literacy levels influence the quality of adolescents' online learning experiences. Adolescents with high digital literacy tend to be more adaptable, productive, and able to build positive social interactions in online learning, while adolescents with low digital literacy are more vulnerable to technical difficulties and social limitations, which ultimately affect their academic achievement and emotional well-being. This study emphasizes the importance of developing digital literacy as a strategy to maximize the benefits of online learning while supporting healthy social interactions among British adolescents.

### **Online learning has an impact on the social interactions of teenagers in the UK, both in face-to-face contexts and online interactions.**

Online learning has become an integral part of the educational experience of young people in the UK, especially following the COVID-19 pandemic, and this phenomenon has had a significant impact on their social interactions. According to Orben (2025), although digital technology allows young people to stay connected with friends and teachers, online interaction patterns do not completely replace the quality of face-to-face interactions. Many young people report that communication through digital platforms feels more limited in conveying emotions, building empathy, and developing deep interpersonal relationships. Furthermore, the Cambridge Assessment (2022) emphasized that adolescents' social experiences in online learning are highly dependent on their technology usage patterns. Adolescents who actively participate in discussion forums, online collaborative groups, and digital projects can maintain positive social interactions. However, for adolescents who are less digitally skilled or less motivated to interact online, online learning tends to reinforce feelings of social isolation and reduce the quality of face-to-face interactions in the school environment. From a social media perspective, Alluhidan et al. (2024) found that adolescents tend to utilize online platforms to stay in touch with peers, share learning experiences, and discuss assignments, creating new forms of social interaction. However, these interactions differ from traditional interactions; online communication is often shorter, more informational, and less emotionally expressive. This creates a duality: online learning provides space for flexible social

interaction, but can reduce the depth of interpersonal relationships if not balanced with face-to-face interaction. Thus, online learning impacts the social interactions of adolescents in the UK in two dimensions. First, online learning platforms provide a means for communication, collaboration, and information exchange, enabling adolescents to stay connected. Second, face-to-face learning can reduce the frequency of in-person interactions at school, potentially weakening social skills and the quality of interpersonal relationships. Therefore, this study emphasizes the need for strategies that integrate online and face-to-face interactions so that adolescents can benefit academically while maintaining the quality of their social interactions.

### **Can digital literacy be a factor that mediates the negative impact of online learning on social interactions and adolescent well-being?**

Digital literacy plays a crucial role as a mediating factor in the relationship between online learning and adolescents' social interactions. According to Smith & Jones (2025), digital literacy encompasses adolescents' ability to effectively access, evaluate, utilize, and create digital content, including critical skills in assessing the quality of information and ethical online interactions. These skills not only influence academic performance in online learning but also determine how adolescents manage online social relationships. Research by Levy et al. (2022) shows that adolescents with high digital literacy are better able to manage their time and digital interactions healthily, thus minimizing the negative effects of online learning—such as social isolation, anxiety, or digital stress. Digitally skilled adolescents tend to utilize online platforms to collaborate, discuss, and maintain social connections with peers, without feeling isolated. Conversely, adolescents with low digital literacy often struggle to utilize online learning and social media features, limiting their social interactions and increasing the risk of digital stress.

Furthermore, Hassoun et al. (2024) emphasize the concept of digital resilience, namely an individual's ability to navigate digital risks and develop adaptive strategies in online environments. High digital literacy enables adolescents to develop digital resilience, namely the ability to stay connected with peers, maintain ethical online communication, and cope with negative experiences on social media in a healthy manner. Thus, digital literacy functions as an intermediary or mediator that reduces the negative impact of online learning on emotional well-being and social interactions. In other words, digital literacy is not just a technical skill, but also a critical social-cognitive skill in the context of online learning. Improving digital literacy can help adolescents:

1. Maximizing the benefits of online learning, such as access to information and collaboration.
2. Managing online social interactions to keep them positive and constructive.
3. Reducing the risk of digital stress and negative impacts on mental well-being.

Therefore, this study confirms that digital literacy plays a strategic role as a mediator linking online learning with the quality of social interactions and well-being of adolescents in the UK. Digital literacy development should be an integral part of online education strategies to ensure that digital learning experiences provide academic benefits while supporting adolescents' social-emotional well-being.

### **What strategies or approaches can be implemented to optimize the use of online platforms to support the social development and well-being of adolescents?**

Optimizing the use of online learning platforms to support adolescents' social development and well-being requires a comprehensive strategy, focusing not only on academic aspects but also on the socio-emotional dimension. According to Orben (2025), this strategy should balance online and face-to-face interactions, allowing adolescents to continue building social skills directly while utilizing the flexibility of digital technology. One important approach is the development of comprehensive digital literacy. Smith & Jones (2025) emphasize that digital literacy should encompass technical skills, critical thinking skills, and online communication ethics. With good digital literacy, adolescents can use online platforms to collaborate, discuss, and complete group assignments productively, while maintaining healthy social interactions. Digital literacy also enables adolescents to filter relevant information, manage screen time effectively, and reduce the risk of digital stress.

Furthermore, social support-based approaches have also proven effective. Alluhidan et al. (2024) found that interventions involving facilitating peer communication and online teacher support can increase social connections and a sense of belonging in digital learning environments. For example, teacher-facilitated online discussion sessions, collaborative study groups, or online social projects can encourage adolescents to remain socially active while simultaneously gaining meaningful learning experiences. Another recommended strategy is integrating interactive and reflective activities into online learning. Hassoun et al. (2024) showed that learning platforms that provide discussion forums, collaborative quizzes, or creative projects enable adolescents not only to interact academically but also to develop communication, empathy, and collaboration skills—all important aspects of social development.

Thus, the following combination of strategies can be implemented:

1. Developing digital literacy to improve the technical, critical, and social skills of adolescents.
2. Integration of online social interactions through study groups, discussions, and collaborative projects.
3. Balance online and face-to-face interactions to maintain the quality of interpersonal relationships.
4. A reflective and interactive approach that allows teens to express ideas, share experiences, and build empathy in a digital environment.

This overall strategy emphasizes that the use of online learning platforms can be maximized not only for academic achievement but also to support adolescents' emotional well-being, social skills, and identity development. With proper implementation, online learning has the potential to strengthen social interactions and shape more adaptive, critical, and prosperous adolescents in the digital age.

## **CLOSING**

### **Conclusion**

Based on the research results, it can be concluded that digital literacy plays a crucial role as a determining factor and mediator in the online learning experiences and social interactions of adolescents in the UK. Adolescents with high digital literacy are able to utilize online platforms effectively, including understanding material, participating in discussions, and collaborating with peers and teachers. Good digital literacy also helps them manage online social interactions in a healthy manner, minimize digital stress, and maintain mental well-being. Research shows that online learning has a dual impact on adolescents' social interactions. On the one hand, online platforms provide opportunities to stay connected, collaborate, and access a wide range of information. On the other hand, face-to-face interactions are reduced, which can diminish the depth of interpersonal relationships and certain social skills if not balanced with appropriate strategies. Furthermore, this study confirms that strategies for optimizing the use of online platforms, such as developing digital literacy, integrating collaborative activities, and balancing online and face-to-face interactions, can support adolescents' social development and well-being. Therefore, digital literacy is not just a technical skill, but also key to ensuring a productive, interactive online learning experience that supports adolescents' emotional well-being.

### **Suggestion**

Based on the research findings, several suggestions that can be given include:

1. **Structured Digital Literacy Development:**  
Schools and educational institutions need to integrate comprehensive digital literacy programs, encompassing technical, critical, and social skills, so that adolescents can utilize online learning optimally and safely.
2. **Enhancing Online and Face-to-Face Social Interactions:**  
Teachers and educational administrators can design learning activities that combine online and face-to-face interactions, such as collaborative projects, group discussions, and interactive forums, to maintain the quality of adolescents' social relationships.
3. **Emotional Support and Companionship:**

Parents, teachers, and counselors are expected to provide guidance on screen time management, digital ethics, and coping strategies for digital stress, to support adolescents' emotional well-being.

4. Reflective and Interactive Use of Online Platforms:

Online learning platforms need to be designed with features that encourage active participation, self-expression, and constructive social interaction, so that the learning experience becomes more meaningful and enjoyable for adolescents.

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