



INTENSITY OF SOCIAL MEDIA USE AND LITERACY SKILLS IN STUDENTS: A STUDY IN THE CONTEXT OF LEARNING, ENTERTAINMENT, AND COMMUNICATION

Saiful Fallah¹⁾, Ilham²⁾, Hartono³⁾ Udi Utomo⁴⁾, Syahrul Syah Sinaga⁵⁾ Paulus Widjanarko⁶⁾

Semarang State University^{1,2,3,4,5}, Slamet Riyadi University⁶

fallah.saiful@students.unnes.ac.id¹

ilham3112@kemenhub.go.id²

hartono@mail.unnes.ac.id³

udiutomo@mail.unnes.ac.id⁴

sinaga@mail.unnes.ac.id⁵

pauludwiwiet@gmail.com⁵

Article history:	Abstract:
<p>Received: March 26th 2024 Accepted: April 28th 2024</p>	<p>This research investigates the correlation between social media usage intensity and literacy skills among students in learning, entertainment, and communication contexts. The primary objective is to comprehend the impact of students' interaction with social media on developing their literacy skills. Employing a descriptive quantitative research design, the study involves 397 high school and vocational school students in Indonesia. Social media usage intensity is categorized into three main aspects: learning, entertainment, and communication. The analysis evaluates students' time on social media and the predominant platforms used. Literacy skills encompass understanding, evaluating, and utilizing information from social media. Analysis results reveal a significant correlation between the intensity of social media usage for learning and communication and students' literacy skills. However, the use of social media for entertainment and specific dimensions of social media usage intensity do not significantly impact students' literacy. The regression model's lack of heteroskedasticity is verified using the Breusch-Pagan test. This research contributes significantly to understanding the influence of social media on students' literacy, with implications for the development of more effective educational strategies. Future research should consider expanding the sample and incorporating more diverse age groups, cultures, and regions. Additionally, careful consideration of control variables, employing more valid measurements, and adopting research designs that integrate quantitative and qualitative approaches can enhance the accuracy and depth of findings. The development of tailored interventions to enhance social media usage and support literacy could be a focal point for future research.</p>

Keywords: Social Media, Students, Usage Intensity, Literacy Skills, Education.

1. INTRODUCTION

The digital era has transformed the paradigm of human interaction with their environment, one of which is in the world of education (Akcil & Bastas, 2020). Social media has emerged as a significant driver of this change (Ruparel et al., 2020). In the context of student life, social media is not just a communication platform but a dynamic entity that permeates critical aspects of life, such as learning (Höttecke & Allchin, 2020), daily entertainment (Ojomo & Sodeinde, 2021), and even become a medium of communication within the family environment, coworkers, and for communication in public spaces (Tkáčová et al., 2021). It is essential to understand that the intensity of social media use is limited to how often students engage in online interactions and to what extent they integrate social media into various contexts (Barykin et al., 2020). Using social media as an additional learning tool, students explore the dominant platforms to deepen their academic knowledge (Jabori et al., 2022). Social media plays a significant role as a primary source of entertainment for students. Various forms of content, from short videos to funny memes (UNESCO, 2018), are crucial in relieving stress and creating a dynamic entertainment environment (Gao et al., 2023). For a teacher, social media opens up unlimited access to information (Van Den Beemt et al., 2020). However, this can also become a barrier for a teacher when utilizing it for learning if student interest is low (Galvin & Greenhow, 2020). As for the students themselves, it is an authentic learning space that has the potential to increase knowledge but can also make students low in learning

(Sabah & Altalbe, 2022). Students' literacy skills are essential (Deepa et al., 2022); this can be seen in how students evaluate content on social media (Belova et al., 2022). Using applications and devices for academic purposes trains teachers and students beyond conventional education (Tripp-Barba et al., 2022). Especially during the COVID-19 pandemic, social media opens up unlimited access to information (Abriata, 2022). Literacy skills become essential in guiding students or anyone through the sea of digital content to be ethical, feasible, and reliable in analyzing the digital public space (Seibicke & Michailidou, 2022). This can enhance knowledge and competence as well as behavior in using social media (Ilham. et al., 2023), increase participation to foster meaningful relationships and improve educational satisfaction (Ensmann & Whiteside, 2022), and provide student feedback on learning (EISayed et al., 2021). The literacy skills from utilizing social media will lead to either positive or negative benefits. The presence of social media in students' lives has created a complex landscape. Therefore, this research intends to contribute to understanding the complex interactions between students and social media. Through the breakdown of the variables of usage intensity and literacy skills, this research is directed to provide a view of two key dimensions: Intensity of Social Media Use and Literacy Skills in Students. The focus on the Literacy Skills Variable creates a foundation for exploring how students understand, evaluate, and use information encountered on social media, whether it influences literacy or not in learning, entertainment, and communication.

2. LITERATUR REVIEW

In the context of "Intensity of Social Media Use and Literacy Skills in Students," previous research has highlighted the central role of social media in students' lives. According to Anderson & Jiang (2018), the intensity of social media use can significantly impact student welfare, creating new opportunities for learning, entertainment, and social interaction. This study shows that social media platforms serve as a source of information, shape digital identities, and influence how students participate in digital content. In line with the intensity of social media use, Clark et al (2019) research has highlighted its impact on student learning. They found that students who intensively use social media for educational purposes tend to have higher levels of motivation and engagement. However, along with its benefits, the literature also notes the potential negative impacts of the intensity of social media use. According to Twenge and Campbell (2018), excessive social media use can be associated with increased levels of depression and anxiety in adolescents. This study underscores the importance of understanding the right balance in social media use, especially amidst students' academic and social demands. On the side of social media literacy, research by Livingstone and Sefton-Green (2020) explores how students develop their literacy skills through interactions with social media. This study highlights the critical role of social media literacy in shaping how students understand, evaluate, and use the information they encounter. From literacy skills, research findings by Nygren & Guath (2022) and (Guath & Nygren (2022) show that students' ability to evaluate and confirm news from digital media is related to their attitudes about credible news. However, this research also confirms a digital literacy gap between students in theoretical Education programs and students studying vocational education, indicating that different Education programs can produce different knowledge, skills, and attitudes related to digital literacy.

Table 1. Variabel dan Indikator

Variable	Indicator	Source
Overall, using social media for communication (USMC)		
(Literacy Skills)	Able to understand the message conveyed in the media	(Livingstone & Sefton-Green, 2020) (Nygren & Guath, 2022) (Guath & Nygren, 2022)
	Able to distinguish between facts and opinions in the media	
	Able to summarise information from the media	
	Able to assess the credibility of information sources	
	Able to assess information bias	
	Able to assess the relevance of information	
	Able to use information to support arguments	
	Able to use information to solve problems	
Able to use information to improve knowledge		

Variable	Indicator	Source
Intensity of social media use for learning (ISML)	Amount of time spent learning to make use of social media	(Anderson & Jiang, 2018), (Twenge & Campbell, 2018) (Livingstone & Sefton-Green, 2020)
	Frequency of social media use for learning	
	Types of social media used for learning	
Overall, using social media to support learning (USMSL)		
Intensity of social media use for entertainment (ISME)	Amount of time spent on entertainment using social media	(Twenge & Campbell, 2018) (Anderson & Jiang, 2018) (Livingstone & Sefton-Green, 2020)
	Frequency of social media use for entertainment	
	Types of social media used for entertainment	
Overall, using social media for entertainment (USME)		
Intensity of social media use for communication (ISMC)	Amount of time spent communicating using social media	(Twenge & Campbell, 2018) (Anderson & Jiang, 2018) (Livingstone & Sefton-Green, 2020)
	Frequency of social media use for communication	
	Types of social media used for communication	

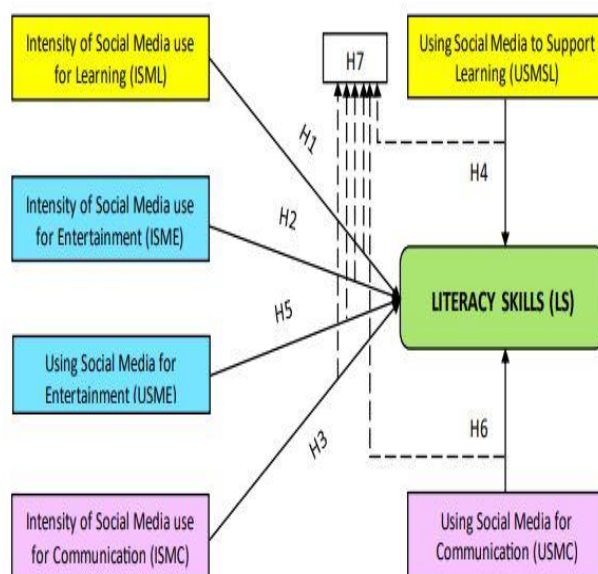


Figure 1. Research framework

Here are the seven hypotheses we propose:

- H1: The intensity of social media use for learning (ISML) positively affects the Literacy Skill Variable Value.
- H2: The intensity of social media use for entertainment (ISME) positively affects the Literacy Skill Variable Value.
- H3: The intensity of social media use for communication (ISMC) positively affects the Literacy Skill Variable Value.
- H4: Using social media to support comprehensive learning (USMSL) positively affects the Literacy Skill Variable Value.
- H5: Using social media for comprehensive entertainment (USME) positively affects the Literacy Skill Variable Value.
- H6: Using social media for comprehensive communication (USMC) positively affects the Literacy Skill Variable Value.
- H7: There is an interaction between the intensity of social media use (ISML, ISME, ISMC) and comprehensive social media use (USML, USME, USMC) in influencing the Literacy Skill Variable Value.

3. RESEARCH METHODS

3.1 Population Data and Respondents .

This study uses a descriptive quantitative research design to explore the relationship between Social Media Use and Literacy Skills in Students. This approach allows for systematic data collection and in-depth statistical analysis connected to pupils' reading proficiency and the extent of their use of social media. The sample of this study consists of Secondary School and Vocational High School students in Klaten Regency. Sampling was done randomly, considering the variation in the degree of social media use and the intensity of literacy skills. Based on relevant statistical needs analysis, the sample size used is 397 students out of a population of 45,267.

3.2 Data Processing and Methods

The primary instrument used is a questionnaire with a Likert scale. The questionnaire is designed to measure the intensity of using social media in different settings (education, entertainment, and communication) and students' literacy skills (understanding, evaluation, and use of information from social media). Each question or statement is measured using a Likert scale with a range of values, such as (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree. The collected data is analyzed using descriptive statistical methods using multiple linear regression.

4. RESULTS AND DISCUSSION

4.1 Result

From the research, the results were obtained through data model testing using Multiple Linear Regression as follows:

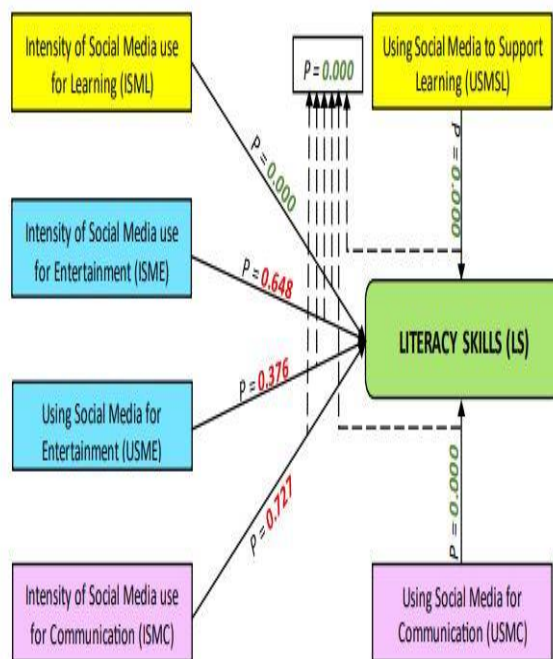


Figure 2. Regression test results

Table 3. ANOVA Summary and R-square

	Sum of Squares	df	Mean Squares	F	Nilai P (P value)		Y
Total	7038.549	396	0.000	0.000	0.000	R-square	0.248
Error	5295.797	390	13.579	0.000	0.000	Adjusted R-square	0.236
Regression	1742.752	6	290.459	21.39	0.000	Uji Durbin-Watson	1.813

Table 4. Breusch-Pagan Test

	Statistical Test	df	P value
Uji Breusch-Pagan	8.717	6	0.190

Based on the statistical analysis, there is a significant relationship between the variable of using social media to support comprehensive learning (USMSL), using social media for comprehensive communication (USMC), and the intensity of social media use for learning (ISML) with Student Literacy Skills. The dimensions of using social media to support comprehensive learning (USMSL) and using social media for comprehensive communication (USMC) show a significant favorable influence, with each increase of one standard deviation in these variables resulting in an increase in Student Literacy Skills by the respective standardization coefficients (USMSL: 0.277, USMC: 0.209). This is supported by the significant T-values (USMSL: 5.578, USMC: 4.171) and P-values approaching zero (0.000). Meanwhile, the variable of the intensity of social media use for learning (ISML) also shows a fruitful and noteworthy partnership with Student Literacy Skills, with a standardization coefficient of 0.203, a T-value of 4.096, and a P-value approaching zero. However, there is no significant correlation between Student Literacy Skills and the variables of utilizing social media for entertainment (USME), communication (ISMC), and entertainment (ISME), respectively. Although the standardization coefficients of using social media for comprehensive entertainment (USME) and the intensity of social media use for entertainment (ISME) show a positive relationship. The intensity of using social media for communication (ISMC) shows a negative relationship; the relatively low T-values (USME: 0.886, ISMC: 0.349, ISME: 0.457) and relatively high P-values (USME: 0.376, ISMC: 0.727, ISME: 0.648) indicate that there is no positive influence and reject the existing hypothesis, which states that there is an influence between these dimensions in the Intensity of Social Media Use variable on Student Literacy Skills. Therefore, these results suggest that there may not be a significant relationship between the variables of using social media for comprehensive entertainment (USME), the intensity of using social media for communication (ISMC), and the intensity of using social media for entertainment (ISME) with Student Literacy

Skills in the context of this research. From the statistical test known as the Breusch-Pagan test, which is employed to identify heteroscedasticity in the regression model, a p-value of 0.190 was obtained. This is more significant than 0.05; therefore, it is concluded that there is no heteroscedasticity in the existing regression model. Additionally, this indicates that the variance of the residuals is distributed constantly throughout the independent variable values' dimension range. From the results of the statistical analysis, the model used explains 24.8% of the variation in literacy skills, as indicated by the R-square value. After adjusting the quantity of variables in the model, this contribution slightly decreases to 23.8%, as indicated by the Adjusted R-square value. Although several variables do not positively affect literacy skills, the model still has a positive effect. Nearly two is the Durbin-Watson value, indicating no significant autocorrelation in the model residuals, fulfilling the assumption of observation independence. It should be noted that only about a quarter of This model explains the diversity in literacy skills., indicating that other factors outside this model also affect literacy skills.

4.2 Discussion

The use of social media for learning, entertainment, and communication.

This research has provided several interesting findings that expand our knowledge on how the use and intensity of social media use affect students' literacy skills. One of the main findings is that using social media to support learning and communication significantly positively affects students' literacy skills. This aligns with previous research by Anderson & Jiang (2018) and Clark et al. (2019). However, this study provides further evidence of this relationship by showing that each standard deviation increases within the social media use, a variable from the social media usage component to support comprehensive learning (USMSL), and using social media for comprehensive communication (USMC) increases students' literacy skills. Unlike previous research by Twenge & Campbell (2018), which found that excessive use of social media can be associated with increased levels of depression and anxiety in adolescents, the results of this study did not find a significant relationship between the use of social media for entertainment and students' literacy skills, with the results showing that the use of social media for entertainment does not directly affect students' literacy skills. This research found that the intensity of using social media for learning has a positive and significant relationship with students' literacy skills. This new finding was not directly discussed in previous research and shows that it is crucial to employ social media platforms for specific purposes and how often students use them for those purposes. Meanwhile, this research also shows that the use of social media to support communication has a significant positive effect on students' literacy skills; this is in line with research (Livingstone & Sefton-Green, 2020; Guath & Nygren, 2022) which found that students' ability to evaluate and confirm news from digital media is related to their attitudes about credible news which also shows the existence of a digital literacy gap between students in theoretical Education programs and students who study in vocational education. Although the results of this research did not directly explore this aspect, the findings of this research about the positive influence of using social media for learning and communication on students' literacy skills can provide additional insights into how this gap might be influenced by the way students use social media.

Heteroscedasticity in Regression Models This research uses the Breusch-Pagan test to detect heteroscedasticity in regression models and found that the residuals' variance is constantly distributed across the dimension values of the existing independent variables. This is a necessary assumption in the study of regression and guarantees that the parameter estimates in this research are unbiased and efficient. Although this is not a direct difference from previous research, this is an essential aspect of your research that distinguishes it from others. Overall, this research provides new and exciting insights into how the application of and intensity of social media use affects students' literacy skills. It demonstrates the need for additional study to thoroughly comprehend how social media affects students' literacy skills and how students can optimally use it for educational purposes. This research has significantly contributed to the research on the usage of social media and students' literacy skills.

Effects in a theoretical manner

Utilizing social media platforms for learning (ISML) to literacy skills (Literacy Skills). This finding suggests that social media can serve as a practical learning tool that enriches students' experiences and enhances participation in education. The importance of educational content on social media is also emphasized, implying that focusing on learning content can enhance students' literacy benefits. Media education is also considered vital to help students use social media to further their literacy development—the use of social media for entertainment (ISME) to literacy skills (Literacy Skills). Entertainment activities on social media, such as watching videos or playing games, apparently do not significantly contribute to developing literacy skills. This finding emphasizes the importance of educational content on social media and the balance of social media use between entertainment and learning. Media education is also vital to teach pupils how to use social media more educationally—using social media for communication (ISMC) to literacy skills (Literacy Skills). Communication through social media, such as sharing thoughts or interacting, apparently does not significantly affect the development of literacy skills. This finding reaffirms the importance of educational content on social media and the balance of social media use to maximize literacy benefits. Media education is essential for students, and they should utilize social media to bolster their literacy development. The comprehensive use of social media to further one's education (USML) to literacy skills (Literacy Skills). This result indicates that social media can serve as a practical learning

tool that enriches students' experiences. The focus on educational content on social media is also considered essential. Media education is needed to help students use social media to support their literacy development—the comprehensive utilization of social media entertainment (USME) to literacy skills (Literacy Skills). Entertainment activities on social media do not significantly contribute to developing literacy skills. This finding emphasizes the need for educational content and a balance of using social media between entertainment and education. Media education is necessary to mentor pupils in the use of social media more educationally. The comprehensive use of social media for communication (USMC) to literacy skills (Literacy Skills). This finding suggests that social networking sites can serve as beneficial communication tools that enhance students' educational experiences. The focus on educational content on social media is also considered essential. Media education is needed to assist pupils in using social media to support their literacy development. The interaction between the intensity of social media use (ISML, ISME, ISMC) and the overall use of social media (USML, USME, USMC) affects literacy skills (Literacy Skills). This finding indicates that these two factors influence each other in relation to using social media. The educational content on social media is considered necessary, and media education is needed to instruct pupils on how to use social media to support their literacy development.

Media literacy perspective

The research findings indicate that the use of social media for learning purposes (ISML) has a positive impact on literacy skills. Educational content on social media becomes a critical factor in enhancing student literacy. Conversely, using social media for entertainment (ISME) and communication (ISMC) does not significantly contribute to literacy skills. The importance of media education and a balance of social media use between entertainment and learning have become critical aspects of literacy development. Integrating learning activities involving social media into the curriculum can be an effective strategy to strengthen student literacy. The research results also highlight the complex interaction between the intensity of social media use and the overall use of social media, affirming the need for in-depth media education to guide students in utilizing social media to support literacy development.

Cognitive development perspective

From a cognitive perspective, the research findings indicate that using social media for learning purposes (ISML) positively impacts students' literacy skills. The presence of educational content on social media acts as a catalyst in enhancing understanding and literacy skills. On the other hand, using social media for entertainment (ISME) and communication (ISMC) does not significantly affect students' literacy skills. The importance of considering the cognitive role in utilizing social media for learning is emphasized, including applying a cognitive approach in curriculum design and learning strategies. In conclusion, using social media for learning purposes promotes students' cognitive development, emphasizing educational content that enriches their cognitive experiences.

5. CONCLUSION

This research concludes that using social media, especially for learning purposes (ISML) and communication (USMC), significantly improves students' literacy skills. Educational content on social media is critical in enriching students' learning and communication experiences. On the other hand, the utilization of social media for entertainment (ISME) and the intensity of social media use for communication (ISMC) were not found to have a significant positive impact on literacy. The importance of a balance between entertainment and learning in utilizing social media is also emphasized. These results support the importance of media education in effectively guiding students to use social media to advance their literacy. In addition, these findings indicate the complexity of the interaction between the intensity and overall use of social media, suggesting the need for a holistic approach to integrating social media into the educational curriculum to maximize students' literacy benefits. Overall, this research contributes significantly to understanding social media's function in enhancing student literacy by detailing the different impacts of various dimensions of social media use.

Research Limitations

While this research provides valuable insights into the relationship between social media use and literacy skills, it has several limitations that can be addressed by subsequent research. Expanding the research sample to include more diverse age groups, cultures, and regions must be considered. In addition, further consideration of control variables, more valid measurements, and the application of research designs that combine quantitative and qualitative approaches can enhance the accuracy and depth of findings. The development of tailored interventions to enhance the supportive use of social media for literacy can also be the focus of subsequent research, further contributing to the understanding and implementation effective educational strategies.

REFERENCES

1. Abriata, L. A. (2022). How Technologies Assisted Science Learning at Home During the COVID-19 Pandemic. *DNA and Cell Biology*, 41(1), 19–24. <https://doi.org/10.1089/dna.2021.0497>
2. Akcil, U., & Bastas, M. (2020). Examination of University Students' Attitudes towards E-learning during the COVID-19 Pandemic Process and the Relationship of Digital Citizenship. *Contemporary Educational Technology*, 13(1), ep291. <https://doi.org/10.30935/cedtech/9341>

3. Anderson, M., & Jiang, J. (2018). Teens, social media & technology. Pew Research Center [Internet & American Life Project], 1–9.
4. Barykin, S., Kalinina, O., Aleksandrov, I., Konnikov, E., Yadin, V., & Draganov, M. (2020). Personnel Management Digital Model Based on the Social Profiles' Analysis. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 152. <https://doi.org/10.3390/joitmc6040152>
5. Belova, N., Krause, M., & Siemens, C. (2022). Students' Strategies When Dealing with Science-Based Information in Social Media—A Group Discussion Study. *Education Sciences*, 12(9), 603. <https://doi.org/10.3390/educsci12090603>
6. Clark, R. E., Nguyen, F., & Sweller, J. (2019). The impact of multimedia interactivity on learning: A metaanalysis. *Computers & Education*, 138, 103580–103606. <https://doi.org/10.1016/j.compedu.2019.103580>.
7. Deepa, V., Sujatha, R., & Baber, H. (2022). Moderating Role of Attention Control in the Relationship Between Academic Distraction and Performance. *Higher Learning Research Communications*, 12(1), 64–80. <https://doi.org/10.5590/HLRC.2022.v12i1.1285>
8. ElSayed, A. A., Caeiro-Rodriguez, M., Mikic-Fonte, F. A., & Llamas-Nistal, M. (2021).
9. A Novel Method to Measure Self-Regulated Learning Based on Social Media. *IEEE Access*, 9, 93516–93528. <https://doi.org/10.1109/ACCESS.2021.3092943>
10. Ensmann, S., & Whiteside, A. L. (2022). "It Helped to Know I Wasn't Alone": Exploring Student Satisfaction in an Online Community with a Gamified, Social Media-Like Instructional Approach. *Online Learning*, 26(3). <https://doi.org/10.24059/olj.v26i3.3340>
11. Galvin, S., & Greenhow, C. (2020). Writing on Social Media: a Review of Research in the High School Classroom. *TechTrends*, 64(1), 57–69. <https://doi.org/10.1007/s11528-019-00428-9>
12. Gao, G., Liu, H., & Zhao, K. (2023). Live streaming recommendations based on dynamic representation learning. *Decision Support Systems*, 169(March), 113957. <https://doi.org/10.1016/j.dss.2023.113957>
13. Guath, M., & Nygren, T. (2022). Civic Online Reasoning Among Adults: An Empirical Evaluation of a Prescriptive Theory and Its Correlates. *Frontiers in Education*, 7(July), 1–14. <https://doi.org/10.3389/educ.2022.721731>
14. Höttecke, D., & Allchin, D. (2020). Reconceptualising nature-of-science education in the age of social media. *Science Education*, 104(4), 641–666. <https://doi.org/10.1002/sce.21575>
15. Ilham., Suprianto, B., Wardhono, A., Agung, A. I., Soeryanto, & Rohmani, S. (2023). Effects of Social Media and Behavior on Occupational Health and Safety and Strategy for Improvement. *Changjiang Liuyu Ziyuan Yu Huanjing/Resources and Environment in the Yangtze Valley*, 39(02), 1377–1389.
16. Jabori, S. K., Epstein, A., Wo, L. M., Samaha, G. J., Bayati, M. Al, Ovadia, S., & Thaller, S. R. (2022). Plastic Surgery Training During Coronavirus Disease 2019 Pandemic: A Quantitative Study on Trainees' Wellness and Education. *Journal of Craniofacial Surgery*, 33(6), 1679–1683. <https://doi.org/10.1097/SCS.00000000000008419>
17. Livingstone, S., & Sefton-Green, J. (2020). *Living and Learning in the Digital Age. In The Class* (hal. 20–40). New York University Press. <https://doi.org/10.18574/nyu/9781479884575.003.0002>
18. Nygren, T., & Guath, M. (2022). Students Evaluating and Corroborating Digital News. *Scandinavian Journal of Educational Research*, 66(4), 549–565. <https://doi.org/10.1080/00313831.2021.1897876>
19. Ojomo, O., & Sodeinde, O. A. (2021). Social Media Skits: Reshaping the Entertainment Experience of Broadcast Audience. *SAGE Open*, 11(3), 215824402110321. <https://doi.org/10.1177/21582440211032176>
20. Ruparel, N., Dhir, A., Tandon, A., Kaur, P., & Islam, J. U. (2020). The influence of online professional social media in human resource management: A systematic literature review. *Technology in Society*, 63(December 2019), 101335. <https://doi.org/10.1016/j.techsoc.2020.101335>
21. Sabah, N. M., & Altalbe, A. A. (2022). Learning Outcomes of Educational Usage of Social Media: The Moderating Roles of Task–Technology Fit and Perceived Risk. *Sustainability*, 14(14), 8895. <https://doi.org/10.3390/su14148895>
22. Seibicke, H., & Michailidou, A. (2022). The Challenges of Reconstructing Citizen-Driven EU Contestation in the Digital Media Sphere. *Politics and Governance*, 10(1), 97–107. <https://doi.org/10.17645/pag.v10i1.4674>
23. Tkáčová, H., Pavlíková, M., Jenisová, Z., Maturkanič, P., & Králik, R. (2021). Social Media and Students' Wellbeing: An Empirical Analysis during the Covid-19 Pandemic. *Sustainability*, 13(18), 10442. <https://doi.org/10.3390/su131810442>
24. Tripp-Barba, C., Zaldívar-Colado, A., Peña-García, G.-M., Aguilar-Calderón, J.-A., & Medina-Gutiérrez, A.-R. (2022). Comparative Analysis of Teaching at Public Universities in Sinaloa during Confinement Due to COVID-19. *International Journal of Environmental Research and Public Health*, 19(13), 7687. <https://doi.org/10.3390/ijerph19137687>
25. Twenge, J. M., & Campbell, W. K. (2018). Associations between screen time and lower psychological wellbeing among children and adolescents: Evidence from a population-based study. *Preventive Medicine Reports*, 12(September), 271–283. <https://doi.org/10.1016/j.pmedr.2018.10.003>
26. UNESCO. (2018). A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2. Information Paper no51, 51, 146.

27. Van Den Beemt, A., Thurlings, M., & Willems, M. (2020). Towards an understanding of social media use in the classroom: a literature review. *Technology, Pedagogy and Education*, 29(1), 35–55. <https://doi.org/10.1080/1475939X.2019.169565>