



Contents list available <http://www.kinnaird.edu.pk/>

Journal of Research & Reviews in Social Sciences Pakistan

Journal homepage: <http://journal.kinnaird.edu.pk>



RELATIONSHIP BETWEEN SOCIAL MEDIA USAGE AND TEACHING EFFECTIVENESS AMONG HIGH SCHOOL TEACHERS

Sabra Inam¹, Afshan Naseem¹, Irfan Bashir^{1*}

¹Department of Education, University of Management and Technology, Lahore, Pakistan

Article Info

*Corresponding Author

Email Id: irfanbashir@umt.edu.pk

Abstract

The vibrant educational sector of Lahore, Pakistan is experiencing a trend where high school teachers are increasingly relying on social media to improve their teaching performance. The purpose of this study was to investigate the experiences and attitudes of these high school teachers in relation to their professional practices which are affected by the use of social media within an academic term. A quantitative method was adopted through a well-designed questionnaire that looked into various aspects of social media usage by high school teachers. The respondents were 100 selected high school teachers using convenience sampling technique. The tool had 15 items. Reliability and validity of the tool were conducted to ensure precise and consistent measurements for constructs. Data analysis entailed utilizing Pearson correlation coefficient for determining relationships between variables involved. The findings revealed that there is a significant positive relationship between social media usage and teaching effectiveness among high school teachers in Lahore. Most teachers were sure that they could use social networking sites for professional purposes and believed that it has the ability to improve their teaching positively. Recommendations of this study aim at helping secondary school teachers to totally incorporate it into their teaching styles through specific professional development programs designed for them.

Keywords

Effective Teaching, High School Teachers, Relationship, Social Media



1. Introduction

The rise of social media has facilitated new means of communication and interaction in different aspects of life, education included. It is no wonder that social media provides the teachers with a lot of avenues that may be utilized for professional growth, interaction, and sourcing educational materials and resources. Those platforms are able to cause a paradigm shift in the way teaching takes place and in the very results of education (Sasikala *et al.*, 2021). This trend has increased over the recent past as more effort have been made on the use of social media for educational purposes. Accordingly, they classify social media tools as understanding learning centers in support of teaching by as also media for students and teachers who want their work exhibited to the world (Ertmer & Ottenbreit-Leftwich, 2020). Social media enhances peer learning and encourages student participation by facilitating active and collaborative work. The work encourages them to study individually (Pimdee *et al.*, 2023). There increasing evidence shows that social media is increasingly being embraced on the modern education system. It has been shown in a number of studies recently that a good example to be drawn from the social media can also be a social networking sites for learning. Networks promote acceptance and provide an opportunity to exchange ideas among teachers, and keep in touch, for example, or look for interesting educational materials (Manca & Ranieri, 2016). In this way, the networking sites provide to teachers and educators a cyberspace free of geographical boundaries, in Trust *et al.* (2016). This possible outcome of social media use in education has its

advocates and opponents. Some suggest that social media brings such benefits as distractions, as well as diffusion of false information, and questions relating to privacy and security of users (Tess, 2013). With the provision of a venue for the exchange of ideas, reaching out to the experts in the field and working together with colleagues all over the world, social media has changed the course of learning, making it more engaging and relevant than it used to be (Hortigüela-Alcalá *et al.*, 2019). Nevertheless, the issue of whether using social media enhances teaching effectiveness has remained controversial among educators and scholars. In Lahore, Pakistan where educational means and ways of enhancing one's professional development maybe not as developed, social media can bridge these gaps among teachers. Still, such evidence as to the practice and effectiveness of teaching while employing social networks and other forms of this mass media is quite scarce. This study intends to fill this gap by exploring the correlation between social media usage and high school teachers' teaching effectiveness in Lahore over the course of one academic term. This study is significant for various reasons. To begin with, it seeks to improve the educational process by looking how effective teaching is considering the use of social media. Knowing this can help provide how the teachers can use social networking sites to better how they teach and get their students actively involved in their lessons. In other words, it offers insight into the use of social networks as a form of continuous professional development, opening up new horizons of learning and interaction for teachers in Lahore or similar places. Policymakers

in education can also use the outcomes of this research to understand the reasons of applications of social media navigation in the educational process. This may result to formulation of wider strategies and design where use of social media is encouraged in the learning institutions while also allowing for the limitations of social media that may include student engagement in unrelated activities and security issues. The best way in such environments is to know the ability of social media in these teacher educators' context as this will enable them make the best use of the already available utensils to teach the aspiring teachers. This study however has implications that are even circumventing Lahore, since its outcome is able to reach out to other developing regions that have similar educational challenges, hence enriching the discussions on the use of social media for education. It is hoped that by tackling such issues, this study will enhance knowledge of the potential of such technologies to enhance learning in a range of contexts to the benefit of educators, learners and the education system – whatever form it takes around the globe. The objective of the study was to investigate the relationship between social media usage and teaching effectiveness among high school teachers in Lahore.

H₁: There is significant relationship between social media usage and perceived teaching effectiveness among high school teachers in Lahore.

Social media tools, including Facebook, Twitter, LinkedIn, and others, have made it easier for teachers to grow professionally and share resources. A Greenhow and Chapman (2020) study showed that social media makes it possible to build

professional learning communities in which teachers can debate issues, learn from each other, and more importantly, find up-to-date resources for teaching. These communities of practice encourage teachers to develop their pedagogical expertise which in turn positively influences their teaching practice (Trust *et al.*, 2016). Moreover, it is said that social platforms enable informal and formal continuous professional development (CPD). The online PD activities, on the other hand, assist in, greatly appreciating, advancement in the professional growth of the individual's career. Web-based learning tools are used in a more economical manner for early career librarian professionals, in their migration towards lifelong learning, with activities such as online conferences and training seminars (Hendrix & McKeal, 2017). Since critical reflection and related processes are crucial to successful online teaching and learning, educators need to improve their knowledge of them (Zia *et al.*, 2024). Prior literature focused more on understanding the characteristics of effective professional development (PD) in a conventional face-to-face format. However, little is known about the level of detail of substantive online PD activities and which attributes of such online programs actually serve to improve teachers' practices. Due to the increasing trend of offering such online PD programs and the difficulties that teacher educators encounter in these designing and planning of such activities, such a direction is becoming more relevant (Darling-Hammond & Hyler, 2020; Donitsa-Schmidt & Ramot, 2022). Non-formal online CPD activities include teachers using undirected communication tools, like discussion

boards, and organizing and participating in virtual networks such as Facebook or Twitter (Aguilar et al., 2021; Carpenter & Krutka, 2014).

1.1 Student Engagement and Motivation by using Social Media

Khaola et al. (2022) explored the reasons why students engage in updating statuses on WhatsApp, Instagram and Facebook, as well as how these aspects relate to academic pursuits and helping others. Several motives for the use of these social networking sites, for example, social identity, fame, or seeking social interactions, social pressure, social validation, entertainment, or diversions of any sort have been found. Additionally, it was also noted that when the outbreak of the pandemic was reported, nontraditional students who were traveling from foreign countries had a higher level of social media engagement than any other category which is interesting as it portrays the multifaceted and diverse experiences of students on an international scale. The research further recommended that an understanding of well-being in relation to the individual and how it is relevant could enrich the theory of social compensation. Such platforms may promote the application of interactive and learner-centered strategies, which are said to improve learning (Junco, 2012) Hundreds of thousands of students took to social networks to share ideas with their peers. Students are looking to social media as a means of communicating with other students and evaluation of their performance by the instructor through a teacher's sections page.” Thus, if students are motivated in using social networks as more than just a talk tool, its evolution into teaching tool is

quite possible. Online learning has now become an integral part of the rapid advancement of ICT. To achieve effective online learning, students' profiles, objectives, or in other words learning needs, capabilities, and rate of learning are focused on achieving the learning outcomes. As such, differentiated instruction is also fundamental in changing educational systems for meeting these goals and it can be provided in internet environments but has both advantages and disadvantages (Ayuningtyas et al., 2023, Nisar et al. 2023). For instance, components available on social media like text and video are beneficial to users as they incorporate various aspects of learning making it interactive and interesting. Educators have interviewed many. Most of them are positive about the use of social media for educational aims.

1.2 Social Media: Challenges and Concerns

In spite of the likely advantages, there are a number of limitations and worries related with social media usage in learning. Among these ridicules, one major concern is the likelihood of distraction. Bearing in mind Kirschner and Karpinski's (2010) findings, students and even teachers who excessively socialize on the media do not maintain their attention and concentration for long writing lessons. The incessant provision of information and alerts interrupts the learning process and leads to unproductiveness. Another primary consideration of social media usage in the learning process is privacy and safety. There is a risk that both teacher and students could unintentionally leak phone connected sensitive data and compromise personal privacy (Tess, 2013). Another restraint has to do with the fact that social networks are teeming with

various types of content, some of which are not for the quick consumption of every parent who has access to a child's content, and this challenges educators to carefully sift through all the information they want to pass across to their students (Gleason & von Gillern, 2018). Digital privacy issues have turned to be great concern among the current education systems and approaches because they have implications on the safety, learning and mental health of students. Therefore, solutions to protect students' information are required in educational providers. While technology changes with time, institutions also have to change and revise existing policies in order to be within the legal and moral precincts. It is suggested that students who attend workshops of this kind learn digital privacy more effectively than without their incorporation as part of the teaching strategy (Sharma, 2022).

1.3 Social Media in the Context of Developing Countries

Within the scope of third world nations like Pakistan, the use of social media for educational purposes is of immense importance. Availability of professional development and other academic resources is very much limited to the growth of teachers in such areas. This is where social media can help as it connects people to a vast network of educators as well as endless online materials. In a recent study, the effect of theories addressing social capital and networks on the use of social media in the understanding of globalization has been elaborated, particularly the aspect of social media as a tool for promoting intercultural communication (Fazil *et al.*, 2024). Nevertheless, the issue of the

digital divide is still very prevalent with some teachers not being able to take full advantage of instant networking because of limited or no access to the internet and low levels of digital profile. In a research study, "Education 2.0: Social Media as an Educating Mechanism in Pakistan," Abbas *et al.* (2019) point out that social media is a strong possible means to support education in Pakistan but great infrastructural as well as cultural barriers exist. On top of this, problems connected with connectivity and absence of extensive digital literacy training are still considerable challenges. Existing literature suggests that educators can benefit from several intriguing opportunities cutting across social media and teaching, including social media based professional development, provision of additional teaching resources, and improvement of students' in class participation. On the other hand, it also addresses the issue of the need to consider the threats of such factors as distraction, privacy entrapment and false information. And in such situations as in Lahore, Pakistan, where there could be a tiny bit of available local resources for such a cause, it is the social media that can come in extremely handy for supporting the teachers in their profession. Where social media is concerned, future studies should tend to provide the means to achieve the benefits and not the risks.

1.4 Theoretical Framework

This research uses the Social Cognitive Theory (SCT) advocated by Bandura (1986) to investigate the effects of social media on teaching effectiveness among secondary school teachers in Lahore. People learn from their environment through observing,

modeling, and imitating the behaviors of others. In educational settings, social interactions, for instance over social media, allow teachers to engage and witness best practices in teaching through their colleagues (Manca & Ranieri, 2016; Trust *et al.*, 2016). By socializing within these platforms, for example, teachers can enhance their self-efficacy through positive feedback, support, and praise from other users. This enhanced self-efficacy can translate into the willingness to try new and different methods in teaching. In addition, SCT describes persistence to every behavior the concept of reciprocal determinism in that it is an interaction of personal, environmental and behavioral, all of which are dynamic. In this study, social media use by teachers is determined by their individual characteristics such as age and work, as well as the number of characteristics like support from their school or technology available (Carpenter & Krutka, 2015). This two-fold interaction seeks to show how different aspects round up the overall effectiveness of using social media in teaching.

1.5 Method and Material

This study employs a Correlational research approach in order to investigate the connection between social media usage and teaching effectiveness among high school teachers in Lahore. At a single point in time, a cross-sectional survey design is employed to acquire data from the participants. It is a cross sectional study.

1.6 Research Design

A Cross-Sectional Survey Design has been employed. In a cross-sectional survey, data is gathered from a chosen sample at one point in time (Mills & Gay, 2019).

1.7 Sample size of the Study

The target population consists of high school teachers at Lahore. Convenience sampling was used to access the target population. It was a small scale study. One hundred high school teachers from Lahore were the participants as a sample of the study.

1.8 Instrumentation

For data collection, a self-made questionnaire was utilized. The survey instrument was designed after an extensive literature review and was prepped for use after validation from three educationists who are experts in the field. The questionnaire was responded on 5-point Likert scale, where 1 signifies *Strongly Disagree* and 5 represents *Strongly Agree*. The purpose of developing the instrument was to evaluate social media related usage patterns and in what extent teaching was perceived effective. The survey was conducted online for the respondents to make it easy and to maintain their confidentiality. The reliability of the questionnaire was measured through the internal consistency assessment provided by the Cronbach Alpha coefficient. The 15 items questionnaire had a Cronbach Alpha of 0.87 which is considered excellent. The nature of these items can be categorized into two primary factors:

1.8.1 Social Media Usage Patterns

These items evaluate the frequency and the way in which teachers engage in social media use for professional reasons. For instance, survey questions may ask how often do teachers turn to social networks to look for educational materials, join in activities within interest groups or networks, and promote themselves professionally.

1.8.2 Perceptions of Teaching Effectiveness

These items evaluate the extent in which teachers think social media affects their teaching. Improvements in social networks and sharing resources with students and other teachers as well as the integration of social media into teaching is believed to enhance teaching effectiveness.

1.9 Data Collection

The survey questionnaire was distributed via electronically among one hundred participants and were requested to read carefully and respond the questionnaire.

2. Results

The responses collected from the questionnaire were analyzed using descriptive statistics, including mean, median, mode, and standard deviation which were shown in Table 1. Mean scores and standard deviations (SD) of respondents' perceptions regarding the use of social media for professional and educational purposes. The mean scores range from 3.06 to 3.70, indicating an overall moderately positive perception of social media, as most mean values are above the midpoint of the Likert scale.

Table 1: Mean ad SD of responses

Statements	Mean	SD
1. Social media has improved my professional networking opportunities	3.55	1.10
2. I feel confident in using social media for professional purposes	3.68	1.20
3. Social media has positively impacted my teaching effectiveness	3.67	1.11
4. I frequently use social media to access educational resources and materials	3.50	1.22
5. I believe that social media enhances communication with students, parents, or colleagues.	3.49	1.25
6. Social media platforms offer valuable opportunities for professional development.	3.70	1.10
7. I actively engage in online educational communities or groups on social media.	3.55	1.09
8. I feel supported by my colleagues in integrating social media into my teaching practices.	3.58	0.89
9. Social media has improved my ability to share resources and collaborate with other educators.	3.60	1.04
10. I believe that social media contributes positively to student engagement in my classroom.	3.50	1.08
11. I encounter privacy concerns when using social media for professional purposes.	3.06	1.13
12. I face resistance from the administration in utilizing social media for educational activities.	3.18	0.91
13. Social media has improved my access to diverse teaching resources and perspectives.	3.60	1.04
14. I believe that social media can enhance collaborative learning among students.	3.62	1.03
15. Overall, I consider social media to be a valuable tool for professional growth and development.	3.65	1.02

The highest mean score was observed for the statement that “Social media platforms offer valuable opportunities for professional

development” (M = 3.70, SD = 1.10), followed by respondents' confidence in using social media for professional purposes (M = 3.68, SD = 1.20) and its

perceived positive impact on teaching effectiveness ($M = 3.67$, $SD = 1.11$). Respondents also reported relatively positive perceptions regarding the overall value of social media for professional growth and development ($M = 3.65$, $SD = 1.02$), collaborative learning ($M = 3.62$, $SD = 1.03$), and sharing resources and collaborating with other educators ($M = 3.60$, $SD = 1.04$). The comparatively lowest mean score was recorded for privacy concerns when using social media for professional purposes ($M = 3.06$, $SD = 1.13$), followed by administrative resistance to using social media for educational activities ($M = 3.18$, $SD = 0.91$). These findings suggest that, although respondents generally recognize the professional and educational benefits

of social media, privacy and institutional support remain important areas of concern. The standard deviation values range from 0.89 to 1.25, indicating a moderate degree of variation in respondents' perceptions. The lowest variability was found for perceived colleague support in integrating social media into teaching practices ($SD = 0.89$), while the greatest variability was observed for communication with students, parents, or colleagues ($SD = 1.25$). Overall, the findings indicate a generally favorable perception of social media as a tool for professional development, teaching, collaboration, and access to educational resources, alongside some concerns related to privacy and administrative support.

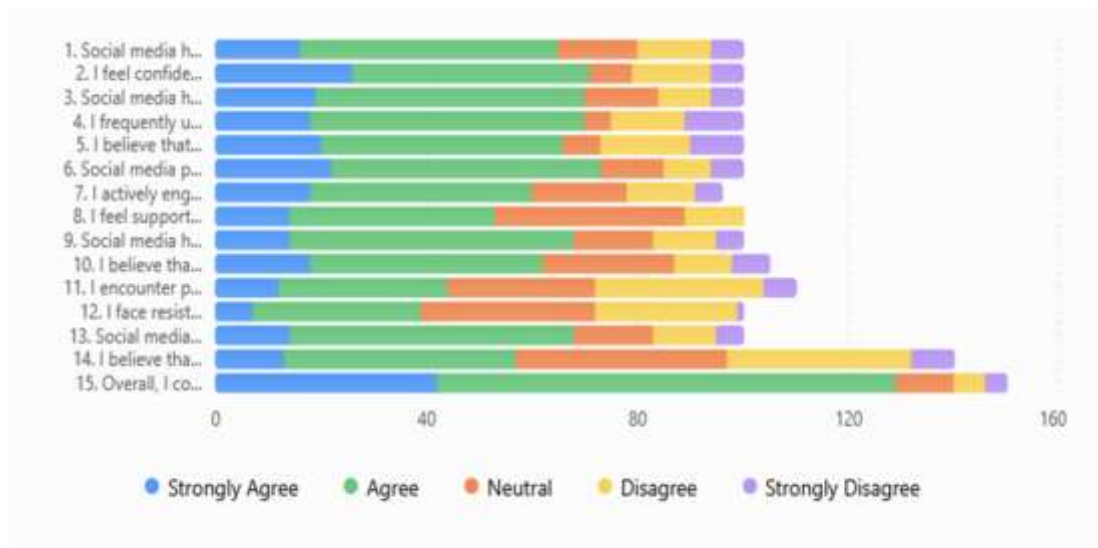


Figure 1: Graph of responses

Figure 1 shows Overall, the responses indicate a generally positive perception of social media among respondents. A substantial proportion of respondents selected Agree or Strongly Agree across most statements. The strongest positive response was observed for the statement that “Overall, I consider social media to be a valuable tool for professional growth and development,”

with 42 respondents strongly agreeing and 87 agreeing. Similarly, respondents showed strong agreement that social media improves access to educational resources, supports professional development, enhances teaching effectiveness, and facilitates networking and collaboration. For the research hypothesis data was analyzed through Pearson's correlation coefficient. The correlation

between Perception of Teaching Effectiveness (PTF) and Social Media Usage Patterns (SMUP) was examined. Table 2 correlates the results of a Pearson correlation analysis between perception of teaching effectiveness and social media usage patterns for a sample of 100 individuals. The analysis revealed a statistically significant strong positive correlation between the two variables, $r =$

0.68, $p < 0.01$. Overall, this result suggests that higher usage of social media for professional purposes is associated with greater perceived teaching effectiveness among high school teachers in Lahore. Hypothesis is accepted. The following key findings were drawn from the results of figure 1, tables 1 and 2.

Table 2: Pearson's Correlation Coefficient between Perception of Teaching Effectiveness (PTF) and Social Media Usage Patterns (SMUP)

Variables		Perception of Teaching Effectiveness	Social Media Usage Patterns
Perception of Teaching Effectiveness	Pearson Correlation		0.68**
	Sig. (2-tailed)		.000
	N		100

**Correlation is significant at the 0.01 level

1. Most of the respondents reported a regular use of social media for work-related tasks such as looking for information, joining the scholarly groups, and seeking professional growth. Social media was most commonly used by teachers for improving their abilities and learning the new aspects of education.
2. Many teachers held the belief that social networks contributed to an effectiveness of teaching them. Improvements were reported by the teachers regarding professional networking and resources communication and sharing with students, colleagues and teaching practices in general.
3. Teachers appreciated these merits but had reservations regarding privacy as well as how much the institutions would support them. Factors such as distraction and the risk of misinformation were also noted as negative aspects of using social networks for educational purposes.

4. The findings of the correlation analysis explicated that there was a positive and strong ($r = 0.68$, $p < 0.01$) correlation between the perception of teacher effectiveness (PTF) and social media use pattern (SMUP). This means that the more one engages in social media activities, the better their teaching is perceived.

3. Discussion

The findings of the study indicate that social media plays a significant role in supporting the professional practices and teaching effectiveness of high school teachers in Lahore. The results demonstrate a generally positive perception of social media, particularly in relation to professional networking, access to educational resources, collaboration, professional development, and teaching effectiveness. The finding that teachers perceive social media as contributing positively to their teaching effectiveness is consistent with previous research suggesting that social media can

provide valuable opportunities for professional learning, knowledge sharing, and the development of teachers' professional skills (Greenhow & Chapman, 2020; Zulfiqar *et al.*, 2022). The relatively high level of teachers' confidence in using social media for professional purposes further demonstrates the growing relevance of these platforms within contemporary educational practice. Teachers reported using social media to access educational materials, exchange resources, collaborate with colleagues, and engage with professional communities. This finding supports Trust and Horrocks (2017), who highlighted the value of online professional learning networks (PLNs) in enabling teachers to share resources, exchange ideas, receive feedback, and gain exposure to innovative teaching practices. Such professional networking can facilitate continuous professional learning and, consequently, contribute to improvements in teaching practices and effectiveness. The findings also suggest that social media extends professional learning beyond formal institutional settings. Through online educational communities and professional networks, teachers can access diverse perspectives and teaching resources and remain connected with developments in their field. This is particularly relevant in the context of secondary education, where teachers may benefit from readily accessible opportunities for collaboration and professional development. However, the findings also highlight several challenges associated with the use of social media in educational contexts. Privacy concerns and perceived resistance from administration emerged as important issues. Although these concerns did

not outweigh the perceived benefits of social media, they indicate that effective integration requires more than simply providing teachers with access to digital platforms. Clear institutional policies, guidance on professional and ethical use, privacy safeguards, and administrative support are necessary to ensure that social media is used responsibly and effectively. Overall, the findings suggest that social media has considerable potential to support the professional growth and teaching effectiveness of high school teachers in Lahore. However, realizing this potential requires a balanced approach that combines opportunities for professional networking and resource sharing with appropriate institutional support, privacy protection, and responsible-use guidelines. Thus, social media should be viewed not merely as a communication tool but as a complementary platform for teachers' continuous professional learning and improvement of teaching practice. In conclusion, the findings of this study highlight that social media has a positive effect on the teaching effectiveness of high school teachers in Lahore. It is argued that by promoting information sharing and professional development through social media, teachers improve their teaching and motivate the pupils. Still, to optimize the potential of social media, it is necessary to resolve issues regarding privacy concerns, institutional backing, and disturbances.

4. Recommendations

From the outcome of this study, the following recommendations are proposed:

- Professional development programs that prepare teachers on the effective use of social media in teaching should be organized by educational institutions. These programs assist teachers in acquiring digital literacy skills as well as the best practices of integrating social media into their social practices.
- Supporting resources and adequate support should be provided by the schools and educational authorities to the teacher on the use of social media platforms. This include provision of technical support, provision of reliable internet, and provision of policy on social media use that allows its safe and effective use.
- Training of educators on how to reduce distractions caused by social media should also be done. This may include limiting social media access during class time and encouraging the use of social media in an effective and constructive manner for educational purposes.

References

Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The impact of social media on learning behavior for sustainable education: Evidence of students from selected universities in Pakistan. *Sustainability*, 11(6), 1683. <https://doi.org/10.3390/su11061683>

Aguilar, S. J., Rosenberg, J. M., Greenhalgh, S. P., Fütterer, T., Lishinski, A., & Fischer, C.

(2021). A different experience in a different moment? Teachers' social media use before and during the COVID-19 pandemic. *AERA Open*, 7, 1-16. <https://doi.org/10.1177/23328584211063898>

Ayuningtyas, S. P. S., Suwastini, N. K. A., & Dantes, G. R. (2023). Differentiated instruction in online learning: Its benefits and challenges in EFL contexts. *Jurnal Pendidikan Teknologi dan Kejuruan*, 20(1), 80–91.

<https://doi.org/10.1234/jptk.2023.123456>

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Prentice-Hall.

Carpenter, J. P., & Krutka, D. G. (2014). How and why educators use Twitter: A survey of the field. *Journal of Research on Technology in Education*, 46(4), 414-434. <https://doi.org/10.1080/15391523.2014.925701>

Carpenter, J. P., & Krutka, D. G. (2015). Social media in teacher education. In *Handbook of research on teacher education in the digital age* (pp. 28-54). IGI Global.

Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID and beyond. *European Journal of Teacher Education*, 43(4), 457-465. <https://doi.org/10.1080/02619768.2020.181696>

Donitsa-Schmidt, S., Ramot, R., & Topaz, B. (2022). Shaping the future of distance learning in teacher education: MOOCs

- during COVID-19. *Perspectives in Education*, 40(1), 250-267.
https://hdl.handle.net/10520/ejc-persed_v40_n1_a15
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2020). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education*, 52(3), 255-274.
- Fazil, A. W., Hakimi, M., Akrami, K., Akrami, M., & Akrami, F. (2024). Exploring the role of social media in bridging gaps and facilitating global communication. *Studies in Media, Journalism and Communications*, 2(1), 13–21.
<https://doi.org/10.32996/smjc.2024.2.1.2>
- Gleason, B., & von Gillern, S. (2018). Digital citizenship with social media: Participatory practices of teaching and learning in secondary education. *Educational Technology & Society*, 21(1), 200-212.
- Greenhow, C., & Chapman, A. (2020). Social distancing meet social media: Digital tools for connecting students, teachers, and citizens in an emergency. *Information and Learning Sciences*, 121(5/6), 341-352.
doi:10.1108/ILS-04-2020-0134
- Hendrix, B. R., & McKeal, A. E. (2017). Case study: Online continuing education for new librarians. *Journal of Library & Information Services in Distance Learning*, 11(3-4), 346–354.
<https://doi.org/10.1080/1533290X.2017.1357432>
- Hortigüela-Alcalá, D., Sánchez-Santamaría, J., Pérez-Pueyo, Á., & Abella-García, V. (2019). Social networks to promote motivation and learning in higher education from the students' perspective. *Innovations in Education and Teaching International*.
- Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), 162-171.
doi:10.1016/j.compedu.2011.08.004
- Khaola, P. P., Musiiwa, D., & Rambe, P. (2022). The influence of social media usage and student citizenship behaviour on academic performance. *The International Journal of Management Education*, 20(2), 100625.
<https://doi.org/10.1016/j.ijme.2022.100625>
- Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and academic performance. *Computers in Human Behavior*, 26(6), 1237-1245. doi:10.1016/j.chb.2010.03.024
- Manca, S., & Ranieri, M. (2016). Facebook and the others. Potentials and obstacles of social media for teaching in higher education. *Computers & Education*, 95, 216-230.
doi:10.1016/j.compedu.2016.01.012
- Mills, G. E., & Gay, L. R. (2019). Educational research: Competencies for analysis and applications (12th ed.). Pearson.
- Nisar, A., Bashir, I., & Ahmad, A. (Sep. 2023). Experience of Academia with Artificial Intelligence as Adaptive Pedagogy. *Pakistan Social Sciences Review*, 7(3), 657–669

- Pimdee, P., Ridhikerd, A., Moto, S., Siripongdee, S., & Bengthong, S. (2023). How social media and peer learning influence student-teacher self-directed learning in an online world under the ‘New Normal’. *Heliyon*, 9(3), e13769. <https://doi.org/10.1016/j.heliyon.2023.e13769>
- Sasikala, M., Rajam, J. A., & Prema, J. M. (2021). Effectiveness of social media in education. *Turkish Journal of Computer and Mathematics Education*, 12(10), 6430-6432.
- Sharma, A. (2022). Teaching digital privacy: Navigating the intersection of technology, education, and privacy. *International Journal of Humanities, Law and Social Sciences*, 9(2), 161.
- Tess, P. A. (2013). The role of social media in higher education classes (real and virtual) – A literature review. *Computers in Human Behavior*, 29(5), A60-A68.
- Trust, T., Carpenter, J. P., & Krutka, D. G. (2016). Moving beyond silos: Professional learning networks in education. *Computers & Education*, 102, 15-34.
- Trust, T., & Horrocks, B. (2017). “I never feel alone in my classroom”: Teacher professional growth within a blended community of practice. *Professional Development in Education*, 43(4), 645–665. <https://doi.org/10.1080/19415257.2016.1233507>
<https://ojs.pssr.org.pk/journal/article/view/709>
- Zia, F., Naseem, A., & Safdar, S. (2024). The role of critical reflection in online teaching. *Pakistan Social Sciences Review*, 8(3), 66–74.
- Zulfiqar, S., Gull, F. & Bashir,I.(2022). Perceived Usability of Social Media as E-Learning Tool in Students at University Level. *Global Sociological Review*, VII (IV), 32-45