Vol.9 No.2 (2026)

Journal of Applied Learning & Teaching

ISSN: 2591-801X

Proudly owned and sponsored by Kaplan Business School, Australia

Content Available at: **https://jalt.open-publishing.org/index.php/jalt/index**

Exploring research designs in social media research in higher education

Nishantha Gamage [A] — [A] *Central Queensland University, Australia*

Pethigamage Perera [B] — [B] *Central Queensland University, Australia & Loyola University, USA*

Sangeetha Kutty [C] — [C] *Central Queensland University, Australia*

Ritesh Chugh [D] — [D] *Central Queensland University, Australia*

Keywords

Emerging trends;
higher education;
PRISMA;
research designs;
social media;
systematic literature review.

Correspondence

s.kutty@cqu.edu.au [C]

Article Info

Received 4 August 2025
Received in revised form 18 March 2026
Accepted 23 March 2026
Available online 26 May 2026

DOI: https://doi.org/10.37074/jalt.2026.9.2.2

Abstract

The rapid integration of social media into higher education has transformed pedagogical practices, research dissemination, and academic collaboration, yet the methodological details of studies examining these developments remain underexplored. This systematic literature review addresses this gap by analysing 60 empirical studies (2022–2024) to map research designs used in studies examining social media use in higher education. Guided by the PRISMA framework, the review synthesises methodologies, theoretical frameworks, participant demographics, and emerging trends. Findings reveal a predominance of quantitative approaches, with surveys as the primary method, underscoring a focus on generalisable insights into usage patterns and academic outcomes. Qualitative and mixed-method designs are less prevalent but provide important depth for exploring digital wellbeing and student agency. Geographically, studies from Asia are strongly represented, particularly Saudi Arabia, Malaysia, and India, reflecting regional emphasis on digital pedagogy, while underrepresented regions highlight gaps in global inclusivity. Thematic analysis identifies six emerging trends shaping research design: technology-driven analytics, digital wellbeing frameworks, crisis-responsive methodologies post-COVID-19, theory-guided models, student co-creation paradigms, and cross-cultural comparative studies. Despite these advancements, 38% of studies lack explicit theoretical foundations, limiting conceptual depth. Ethical considerations, particularly regarding AI tools and data privacy, are increasingly salient but inconsistently addressed. The study advocates for methodological diversification, prioritising longitudinal, ethnographic, and participatory designs to capture evolving digital pedagogies.

Introduction

Social media platforms have become integral to daily life, fundamentally reshaping how individuals communicate, interact and share information. In the context of higher education, platforms such as Facebook, Twitter, YouTube, and Instagram are widely used by students for both academic and personal purposes (Woods et al., 2019). Their integration into academic environments is transforming traditional pedagogical approaches and creating new opportunities for interactive and collaborative learning (Sharma & Begum, 2024). Educators and researchers increasingly recognise social media's potential to enrich teaching and expand the learning experience (Cutajar et al., 2024).

Recent studies have explored the use of social media in educational contexts, examining how students and academic staff engage with these platforms for assessments, communication, and collaborative work. Research has also examined user attitudes, intentions, and satisfaction levels (Al-Rahmi et al., 2022b). According to Chugh and Ruhi (2019), social media is now employed as a pedagogical tool to promote student engagement and collaboration. Mayeaux and Olivier (2022) introduce the concept of professional kinship, where teachers use social media to build support networks that strengthen their practice through both local and global connections. These developments highlight the need for a better understanding of research designs that can capture the complexity of digital interactions in higher education settings.

Research design serves as a foundational element in scholarly inquiry, offering a blueprint that guides methodological decisions and ensures credibility. It encompasses various components, including theoretical frameworks, methodologies, data collection methods, participant selection, sample size, and geographical context. A well-structured design reduces bias and strengthens the reliability and validity of research outcomes. As noted by Saliya (2023),research designs vary depending on factors such as approach, purpose, technology, time horizon, and strategy. For instance, Nwabuko et al. (2024) posit that design is purpose-driven, distinguishing between experimental and non-experimental studies, while Snelson (2016) focuses on qualitative and mixed-method approaches in social media research.

Selecting an appropriate research method is often complex, requiring thoughtful consideration of the research question, the characteristics of the target population, and logistical constraints (Creswell, 2014; Saliya, 2023). Quantitative methods (e.g. experiments, surveys), qualitative approaches (e.g. interviews, case studies), and mixed methods each offer distinct advantages. Given social media's multifaceted influence on students' academic and social lives, research designs must account for these complexities and address ethical considerations (Woods et al., 2019). Rigorous research designs not only enable comprehensive exploration but also inform ethical and effective implementation strategies.

Understanding research designs in the context of social media and higher education is vital for several reasons. First, it ensures an accurate representation of diverse perspectives and evolving digital behaviours (Bode et al., 2020; Nwabuko et al., 2024). Second, it equips researchers with the tools needed to select appropriate methodologies to address their questions and objectives (Gupta, 2023). Third, familiarity with design principles enhances the quality of data collection, analysis, and interpretation. Moreover, it facilitates cross-study comparisons and synthesis, fostering broader knowledge development (Matassi & Boczkowski, 2021).

Despite growing interest in the intersection of social media and higher education, there is a scarcity of recent research specifically focusing on research designs in social media scholarship. For example, Snelson's (2016) review of qualitative and mixed-methods research designs includes only data up to year 2013. Costello et al. (2018) identify methodological limitations of quantitative studies, particularly those focusing on Twitter and Massive Open Online Courses (MOOC). Bode et al. (2020) highlight a broader concern of design inconsistency, noting that data are frequently collected without clearly defined research questions. Although focusing on biology education, Luft et al. (2022), provide insights into theoretical and conceptual frameworks, which may be applicable more broadly. Al-Rahmi et al. (2016) advocate for integrating frameworks such as social constructivism and the Technology Acceptance Model (TAM) when evaluating academic performance through social media.

Collectively, these studies point to an evident gap in the literature: the absence of a recent comprehensive synthesis of research designs used in empirical scholarship examining social media use in higher education. Beyond identifying a temporal shortfall, examining research designs is essential for assessing the intellectual development of a field. Research design choices influence the types of questions posed, the strength of causal inference, the integration of theoretical frameworks, and the cumulative comparability of findings across studies. Without systematic consolidation of prevailing methodological approaches, it becomes difficult to determine whether social media research in higher education is advancing toward theoretical maturity or remaining methodologically fragmented. Addressing this gap is therefore not only timely but necessary for strengthening methodological coherence and conceptual depth within the field. In this study, the term 'social media research in higher education' refers specifically to empirical scholarly studies that investigate the use, adoption, and educational implications of social media within higher education contexts.

To this end, the present study conducts a systematic literature review to examine the research designs used in empirical studies investigating social media use in higher education. Understanding how such research is designed has implications for teaching and learning practice. Research design choices influence the types of pedagogical evidence generated, shaping how learning processes and outcomes can be examined and influencing the extent to which research findings can meaningfully inform curriculum development and instructional decision-making. Examining methodological patterns, therefore, enables educators and researchers to assess whether existing evidence sufficiently captures teaching practices, learner engagement, and institutional adoption of digitally mediated learning environments. The research questions guiding this review are framed to examine methodological patterns that shape the evidence base informing teaching and learning research in higher education. The study aims to identify patterns, evaluate methodological practices, and highlight emerging trends shaping contemporary research. The following research questions guide this inquiry:

- RQ1: What are the variations regarding research methodologies, frameworks, methods, participants, sample size, analysis approach, and geographical contexts in social media research in higher education?
- RQ2: What are the emerging trends in social media research designs in higher education?

By addressing these questions, this review aims to map the current landscape of research designs, identify the theoretical frameworks employed, and examine methodological trends. This contribution will offer researchers and educators a clearer understanding of how social media research is evolving within higher education and guide the selection of appropriate research designs in future work.

Research methodology

This study employs a systematic literature review to analyse the research designs used in empirical studies examining social media use in higher education settings. To ensure methodological transparency and replicability, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) model guided the review process. According to Page et al. (2021), PRISMA supports rigorous reporting by documenting inclusion and exclusion decisions, offering structured presentation via visual and tabular formats, and providing protocols for assessing heterogeneity, bias risk, evidence certainty and study selection (Page et al., 2021).

Building on the database strategy used by Chugh et al. (2021), this review searched four comprehensive academic databases: ProQuest One Academic, Web of Science (Core Collection), Scopus, and EBSCOhost. These platforms were selected for their extensive coverage of peer-reviewed journals across disciplines relevant to higher education and social media research. Web of Science, for instance, indexes over 10,000 journals across multiple citation indices, including the Social Sciences Citation Index and Arts and Humanities Citation Index. Scopus, by contrast, indexes nearly double that number, although there is approximately 70% content overlap with Web of Science (Thien & Ngoc-Bich, 2022). Together, these four databases ensured a robust and comprehensive literature search.

A preliminary search was conducted using the advanced search tool of the first author's institutional library, which supports federated access to all four databases. Boolean operators, truncation, and synonyms were used to maximise coverage and precision. The final search string employed was:

("Social Media" OR "Social networking") AND ("Higher Education") AND (academi*)

The search was executed on 27 November 2024 and yielded 1,739 records across the four databases. These articles underwent an initial filtering process, which applied inclusion criteria that narrowed the selection to 321 records. The criteria required that articles be full-text, peer-reviewed empirical studies published in English between 2022 and 2024, and explicitly focused on social media in higher education contexts. The PRISMA protocol (see Figure 1) was followed throughout the screening process to ensure consistency and transparency.

Subsequently, 150 duplicate records were removed. The remaining records were further screened to exclude non-empirical documents such as literature reviews, conference papers, book chapters, editorials, and general opinion pieces. Articles focusing on topics tangential to the study, such as social media for marketing, institutional promotion, university admissions, or ranking strategies, were also removed. This step reduced the number of eligible studies to 171.

Abstracts and methodologies of these studies were then reviewed in detail, leading to the exclusion of 110 articles that either fell outside the review's scope or lacked full-text access. The remaining 61 articles were subjected to full-text review. One study was removed at this stage because it focused on social identification rather than on the research design. Ultimately, 60 empirical articles (marked with an asterisk* in the reference list) were retained as the final dataset.

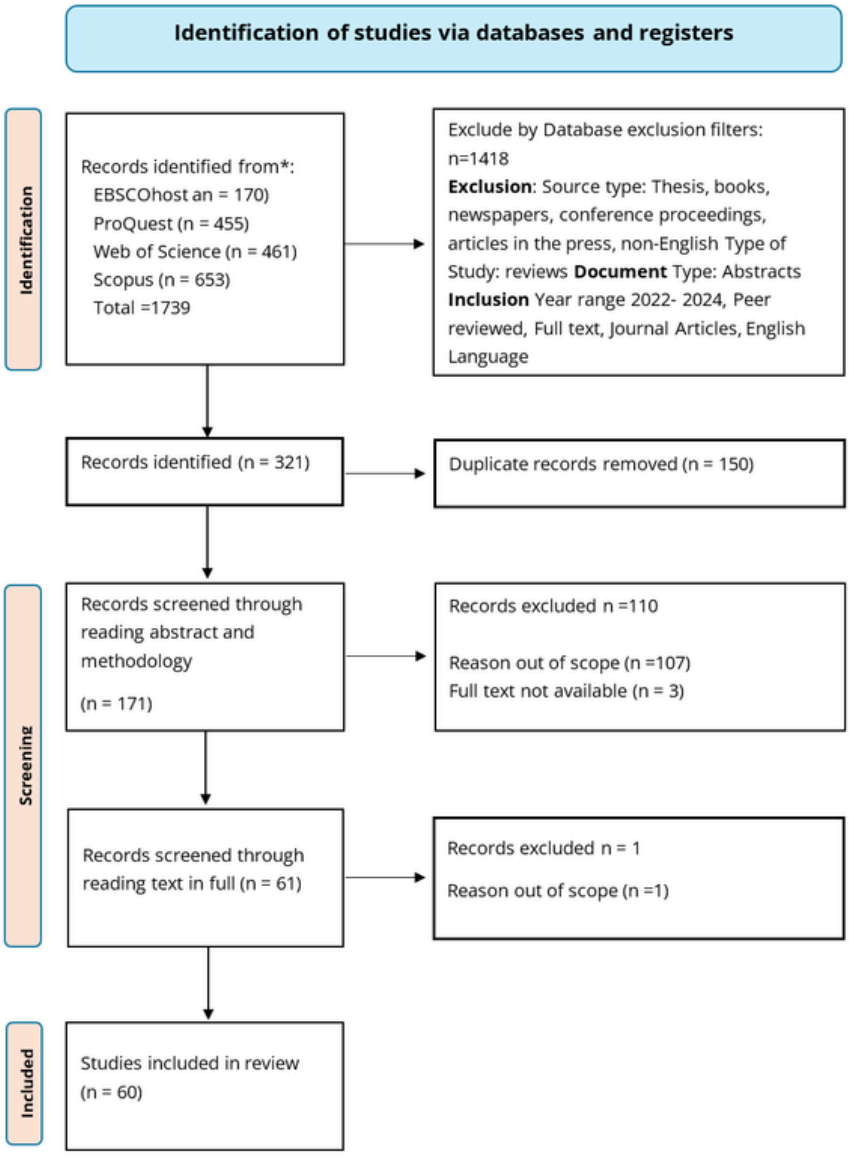

Figure 1. PRISMA flow chart.

Analysis

Research design variations (RQ1)

This section addresses the first research question, which explores the diversity of research methodologies, frameworks, methods, participants, sample sizes, analysis approaches, and geographic distributions in empirical studies on social media within higher education. The analysis is based on 60 peer-reviewed articles identified through the PRISMA screening process.

Research methodologies

The examined studies reveal diverse methodological approaches. As shown in Figure 2, quantitative methodologies dominated, accounting for 68.33% (n = 41) of the studies.

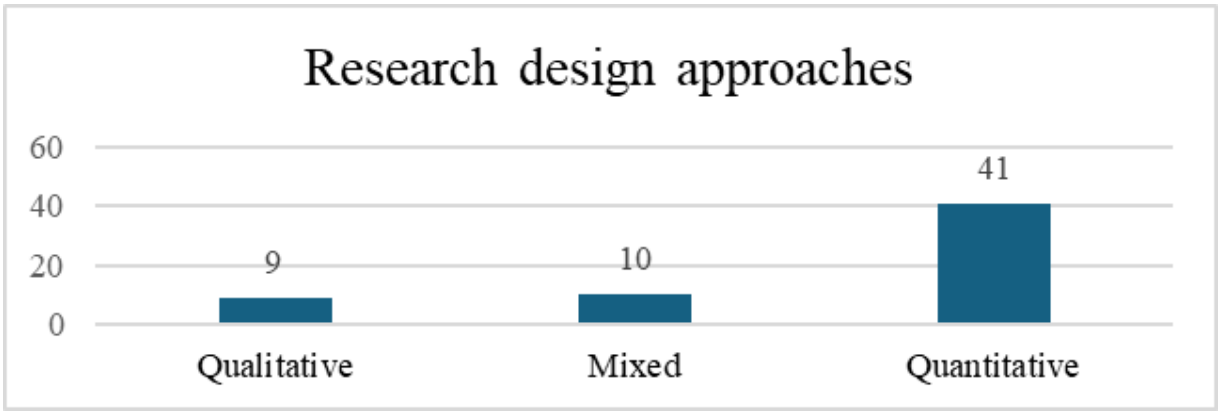

Figure 2. Research design approaches of the screened articles.

Mixed methods were used in 16.67% (n = 10), while qualitative approaches appeared in 15% (n = 9) of the publications. This trend reflects a clear preference for quantitative approaches, likely due to their support for generalisability and hypothesis testing.

Research methods

Surveys were the most commonly used data collection method, featured in 50 of the 60 studies. Their efficiency in capturing responses from large populations and facilitating generalisable findings likely explains their prevalence. Mixed methods, particularly those combining surveys and interviews, appeared in five studies, highlighting the value of methodological triangulation. Qualitative methods such as interviews (four studies) and content analysis (three studies) were less common but provided valuable depth and contextual understanding. Table 1 outlines the distribution of methods across the studies.

Survey methods dominated quantitative research, that were used in 90.24% (37 of 41) of those studies. They also featured in 44.44% of qualitative studies and 90% of mixed-method studies. Interviews followed as the second most employed method, present in 55.55% of qualitative and 50% of mixed-method studies. Other methods, including computational techniques (Reddy et al., 2023), thematic analysis and literature review integration appeared in individual studies. One study was categorised as using “no method”, likely relying on conceptual or theoretical exploration rather than empirical data. Recent studies by Capriotti and Zeler (2023) and Gomez-Vasqu-

Table 1. The research methods of the screened articles.

No.	**Methodology**	**Methods**	**Number**
1	Quantitative	Survey	37
2	Quantitative	Content analysis	2
3	Quantitative	Computational methods	1
4	Quantitative	No method	1
5	Mixed method	Survey & Interview	5
6	Mixed method	Survey	2
7	Mixed method	Survey & Observations	1
8	Mixed method	Survey, Literature review & Experimental	1
9	Mixed method	Thematic analysis	1
10	Qualitative	Interview	4
11	Qualitative	Survey	3
12	Qualitative	Content analysis	1
13	Qualitative	Survey, Interview & Content analysis	1
Total			60

-quez et al. (2024) utilised content analysis as a method for secondary data collection from social media posts, employing quantitative methodologies. Shafiq and Parveen (2023) used a mixed-methodology approach to conduct research using different data-gathering techniques such as surveys and observational methods. Furthermore, mixed-methods research by Fuchs and Aguilos (2023) and Said-Hung et al. (2024) used surveys and interviews without explicitly referencing theoretical frameworks.

Participant distribution

Participant types varied across the studies. As shown in Table 2, students were the predominant participant group, involved in 81.48% (n = 44) of the studies. Academic staff appeared in 11.11% (n = 6), while combined samples of students and academics were used in 5.55% (n = 3) of the studies.

Table 2. Distribution of participants.

No	Participant Category	Article count	Percentage
1	Students	44	81.48%
2	Academics	6	11.11%
3	Students and Academics	3	5.55%
4	Other (Academics and Employees)	1	1.85%

The article by Al-Hail et al. (2024) included broader university personnel, including both academics and staff, and was categorised as “Other” (1.85%, n = 1). Six studies did not include primary participants, relying instead on secondary data, which is discussed in the following section.

Secondary data

Secondary data emerged as a significant source in several studies, reflecting the increasing reliance on digital platforms for academic research. As shown in Table 3, Twitter was the most frequently used platform, appearing in two studies, followed by Instagram, Facebook, and LinkedIn in the others. Some studies utilised cross-platform data or general references to social media. One article drew on scholarly literature from top management and marketing journals, illustrating the use of secondary sources for theoretical framing and historical trend analysis. These diverse sources highlight the evolving methodologies in social media research.

Sample size

The sample distribution in research studies provides a critical perspective on the populations targeted for data collection and analysis. The dataset revealed a diverse range of sample groups, reflecting the breadth of research objectives and the methodologies employed.

Table 3. Article count by type of secondary data.

No.	Type of secondary data	Article count
1	Tweets (Elhersh & Alqawasmeh, 2024; Gomez-Vasquez et al., 2024)	2
2	Instagram (Reddy et al., 2023)	1
3	Posts on Facebook, LinkedIn, and Twitter (Capriotti & Zeler, 2023)	1
4	Posts social media (Slutskyi et al., 2023)	1
5	Published papers in management and marketing journals (Mazurek et al., 2022)	1

Diverse sample sizes

The dataset includes a wide spectrum of sample sizes, ranging from small, specialised groups, such as five women (Sharp, 2024) or eight doctoral students (Dunmade et al., 2023), to large-scale populations, such as 6,821 international students in Australia (Chang et al., 2022). The reviewed qualitative studies' maximum survey sample size was 107 participants (Jordan, 2023), and the interview sample size was 40 participants, focusing on Jordan students' motivations for Facebook usage (Alwreikat, 2023). The qualitative interview research conducted by Tachie and Brenya (2022) used a small sample size of three academics and three students. The mixed-methods sample sizes varied from 86 (Ivanytska et al., 2024) to 2421 (Ibrahim et al., 2022) participants, while often employing sample sizes between 100 and 200 (Fuchs & Aguilos, 2023; Salome et al., 2024; Sivoronova et al., 2024).

This diversity indicates a balance between in-depth qualitative studies and broad quantitative analyses. Smaller sample sizes are often employed for exploratory studies (McNeish, 2017), while larger samples are utilised for generalisable findings and statistical accuracy (Ibrahim & Marcaccio, 2023).

The majority of quantitative survey studies focusing on student participation include 35 research samples, with one study not disclosing its sample size (Muthuswamy & Bayomei, 2023). A substantial percentage of the samples comprise higher education students, with descriptions frequently encompassing specific demographics, including age ranges, specified genders (Iqbal et al., 2023), level of study, country of origin and academic disciplines. For example, one study examined 600 undergraduate students from Egyptian colleges who utilised social networking programs for e-learning (Sobaih et al., 2022a). Two studies employed sample sizes between 500 and 600 students. Alam et al. (2024) examined the benefits of green communication, including social media, among 500 higher education students in India.

The most commonly used sample size range was between 400 and 500 students, observed in 11 studies. For example, Pang et al. (2024) examined the experiences of 486 Chinese international students studying in Germany. Similarly, Hashemi et al. (2022) examined 420 Iranian students to explore their motivations for internet usage, primarily for social networking. In another study, Gelashvili et al. (2024) assessed the influence of social media use intensity among 447 Spanish students. Two additional studies with samples of 400 students each examined social media use: Jitsaeng et al. (2024) focused on engagement factors among Thai students, while Mdletshe et al. (2023) studied Facebook adoption as a communication tool among university millennials in South Africa.

Additionally, eight studies utilised sample sizes ranging from 300 to 400 students, while two studies employed a sample size of 318. For example, Yousef and Yousef (2022) examined the impact of Facebook usage on the academic performance of 318 postgraduate students in Jordan. These variations in student sample sizes across quantitative survey studies are illustrated in Figure 3.

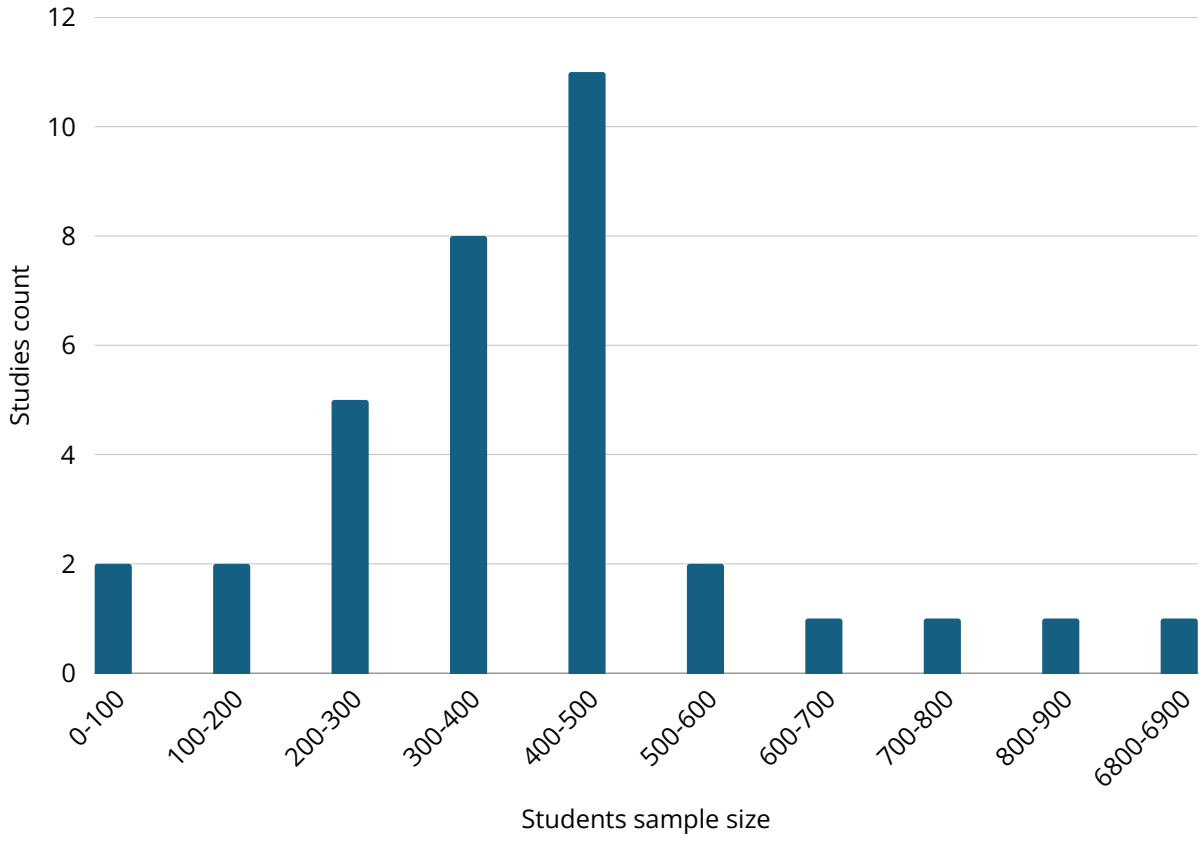

Figure 3. Students' participation in survey studies, sample size variations.

Specialised and contextual samples

Few studies targeted highly specific groups, such as first-generation college students (Gonzalez & Deng, 2023) or doctoral students (Dunmade et al., 2023) in a particular field. These specialised samples reflect the increasing interest in addressing niche research questions and exploring underrepresented populations. For instance, the study by Singh et al. (2023) surveyed 434 postgraduate students from public and private institutes in India, while another study by Muthmainnah et al. (2022) included 32 computer science undergraduate students from a single university.

Global representation

The dataset demonstrates international diversity, with samples drawn from countries such as Malaysia, India, Saudi Arabia, and Australia. This global representation enriches the research findings by incorporating varied cultural, social, and academic contexts. For example, a study by Capriotti and Zeler (2023) included 70 higher education institutions in the USA, Europe and Latin America, while another study by Mazurek et al. (2022) analysed 1,600 authors of articles published in top management and marketing journals globally.

Methodological integration

Many studies combined multiple sampling techniques to achieve comprehensive representation. For example, a study by Oliveira et al. (2023) distributed questionnaires to 4,450 students in Portugal, collecting 329 valid responses. Another study involved 415 undergraduate students and conducted follow-up interviews with a subset of 20 participants (Muhammad & Nagaletchimee, 2023).

Analysis approaches

Multiple data analysis procedures were identified across the reviewed studies, applied either individually or in combination. Table 4 shows that the data analysis techniques were used a total of 94 times across the 60 reviewed publications. Structural equation modelling appeared 18 times, including 17 quantitative studies and one mixed-method study. Descriptive analysis was the most frequently used technique, appearing 32 times overall, including 23 quantitative and nine mixed-method studies.

Table 4. Data analysis methods involved in the screened articles.

No.	**Analysis Method**	**Frequency**
1	Descriptive analysis	32
2	Structural equation modelling	18
3	Inferential statistics	10
4	Thematic analysis	10
5	Factor analysis	5
6	Reliability analysis (Cronbach's alpha)	4
7	Comparative analysis	3
8	Partial least squares analysis	3
9	Content analysis	2
10	Artificial neural network analysis	1
11	Critical realist data analysis	1
12	Direct and indirect effects analysis	1
13	Grounded theory approach	1
14	Interpretative phenomenological analysis	1
15	Sentiment analysis	1
16	Social network analysis	1

The predominance of descriptive and statistical modelling techniques reflects the strong orientation toward quantitative, survey-based research within the reviewed literature.

Quantitative data analysis

The quantitative studies employed a range of statistical analysis approaches. Descriptive analysis and structural equation modelling were the most frequently used techniques within quantitative methodologies (Table 5). These were followed by inferential statistical analysis, applied in nine quantitative studies (and once within a mixed-method study), and factor analysis, used in four quantitative studies (and once within a mixed-method study). Reliability analysis and partial least squares analysis were each employed in three studies.

Table 5. Data analysis approaches in quantitative research designs.

No.	**Data analysis approaches - Quantitative**	**Frequency**
1	Descriptive analysis	23
2	Structural equation modelling	17
3	Inferential statistics	9
4	Factor analysis	4
5	Reliability analysis (Cronbach's alpha)	3
6	Partial least squares analysis	3
7	Content analysis	2
8	Artificial neural network analysis	1
9	Comparative analysis	1
10	Social network analysis	1

Qualitative data analysis

Table 6 presents the use of data analysis approaches within qualitative research designs. Thematic analysis was the most frequently employed method, appearing in five of the nine qualitative studies. The remaining four approaches included comparative analysis, critical realist analysis, grounded theory, and interpretative phenomenological analysis, each used once.

Mixed-method studies

In mixed-method studies, descriptive and thematic analyses were the most commonly employed techniques, reflecting the integration of both quantitative and qualitative components. The remaining seven analytical approaches each appeared only once across the mixed-method studies (Table 7).

Table 6. Data analysis approaches in qualitative research designs.

No.	Data analysis approaches - Qualitative	Frequency
1	Thematic analysis	5
2	Comparative analysis	1
3	Critical realist data analysis	1
4	Grounded theory approach	1
5	Interpretative phenomenological analysis	1

Table 7. Data analysis approaches in mixed-method research designs.

No.	Data analysis approaches - Mixed-method	Article count
1	Descriptive analysis	9
2	Thematic analysis	5
3	Comparative analysis	1
4	Direct and indirect effects analysis	1
5	Factor analysis	1
6	Inferential statistics	1
7	Reliability analysis (Cronbach's alpha)	1
8	Sentiment analysis	1
9	Structural equation modelling	1

Country distributions

Country attribution in this review is based on the institutional affiliation of the first author rather than the empirical research setting. This approach was adopted to provide an indicative overview of patterns in scholarly production and regional research leadership within social media research in higher education. While author affiliation does not necessarily correspond directly to the location of data collection or study participants, it offers insight into the geographic distribution of research activity and publication contribution. The 60 reviewed articles demonstrate a b-

-road geographical and economic spread, encompassing studies conducted across 26 countries. This diversity reflects the global relevance of the research and its applicability to varied socio-economic and cultural contexts. For the country-specific analysis, only the affiliation of the first author was considered when attributing publications to countries (Figure 4). Notably, Saudi Arabia (8 articles), the United States (7), and Malaysia (7) were the most represented countries, indicating contributions from both developed and developing contexts.

Emerging and developing economies, particularly those within the Global South, were strongly represented (Figure 5). A total of 43 articles (72%) originated from 18 developing countries, including South Africa (3), Saudi Arabia (8), China (3), India (4), and Malaysia (7). These contributions highlight the growing scholarly emphasis on development-related challenges, educational innovation, and socio-economic transformation in these regions.

The remaining 13 developing nations from Asia, Africa, and the Middle East contributed a smaller number of articles, typically one or two each. These countries include: Indonesia (2), Iran (2), Thailand (2), Jordan (2), Ukraine (2), Nigeria (1), Pakistan (1), Palestine (1), Qatar (1), Oman (1), Ethiopia (1), Turkey (1), and Chile (1). Although less frequent, these contributions reflect the growing scholarly engagement of underrepresented regions in global academic discourse.

Developed countries were also represented, though to a lesser extent. Eight developed nations contributed a total of 17 articles (28%), distributed as follows: United States (7), Spain (3), Australia (2), and one article each from the United Kingdom, Portugal, Poland, Latvia, and Hong Kong. These countries are generally characterised by well-established academic systems and significant influence on international research standards.

The dataset includes studies from several major global economies, including the United States (7 articles), China (3), India (4), and the United Kingdom (1). Their inclusion shows that the findings incorporate perspectives from globally influential economies, while also reflecting the increasing scholarly output of rapidly growing and emerging nations.

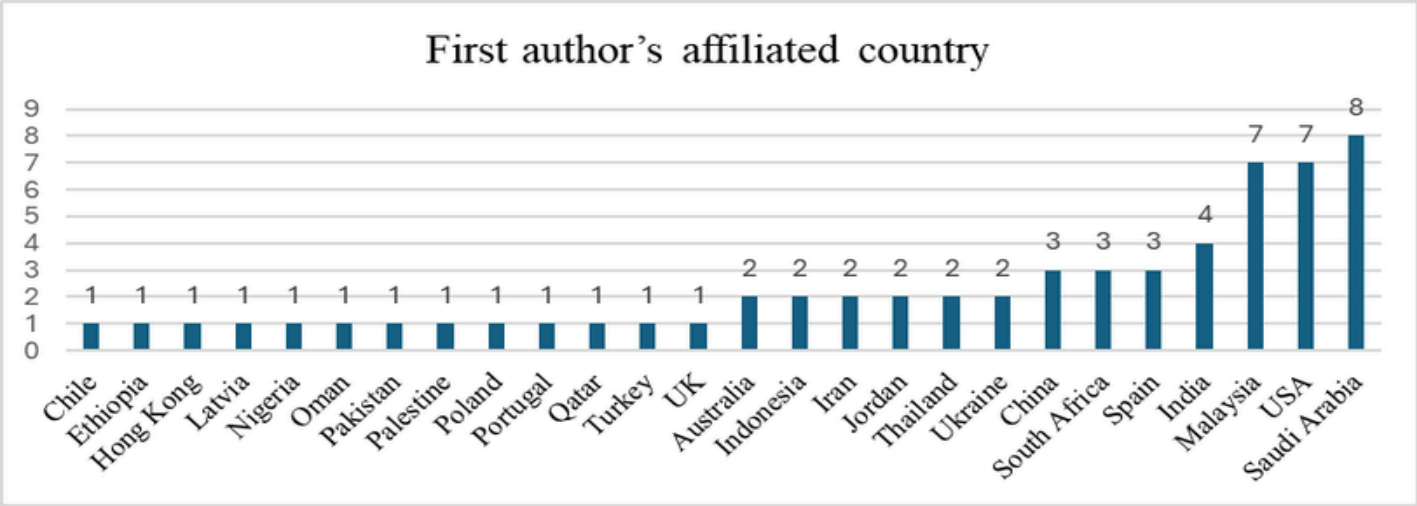

Figure 4. Analysis of publications by the first author's affiliated country.

Year of publication

The publication dates spanned from 2022 to 2024. A noticeable increase was observed in 2023, with 28 articles published. This peak likely reflects increased research attention to digital education trends post-COVID-19 pandemic. In 2022, 17 articles were published, followed by a slight decline to 15 in 2024. Table 8 outlines this temporal trend.

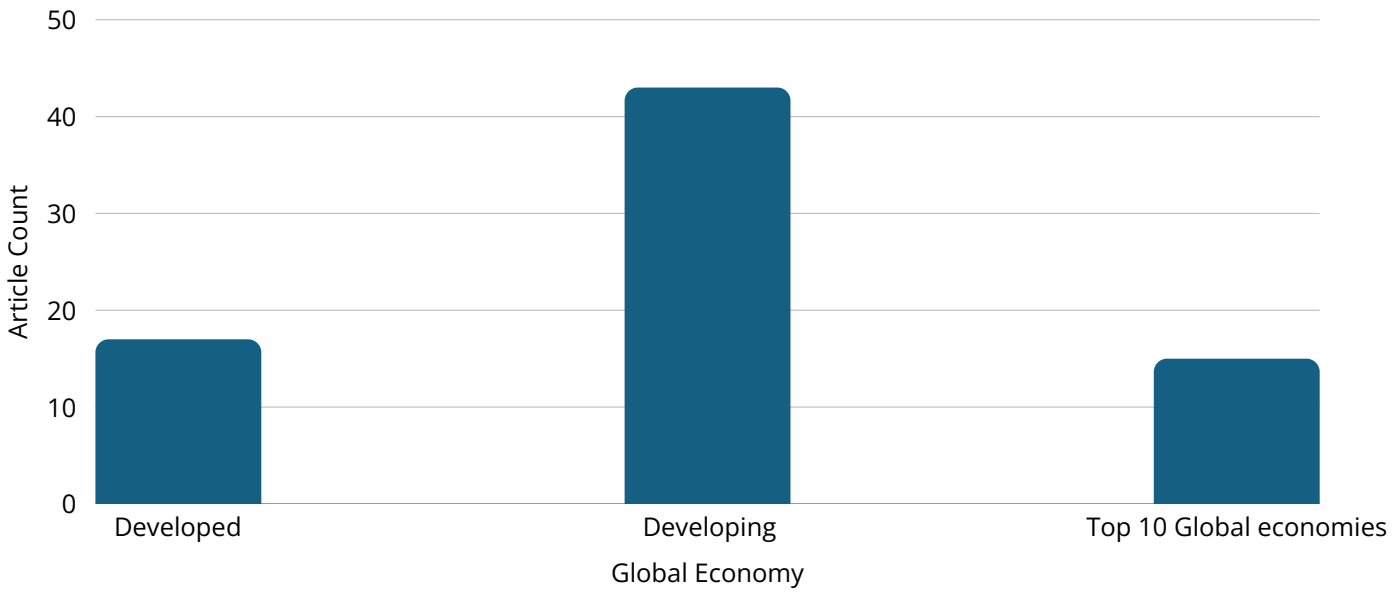

Figure 5. Distribution of articles by global economy.

Table 8. Distribution of publications by year.

No	Year	Article count
1	2022	17
2	2023	28
3	2024	15

Frameworks

The use of theoretical frameworks varied considerably across the dataset. Of the 60 studies, 24 studies did not report any theoretical framework. Among the remaining studies, 35 distinct frameworks were identified across 53 instances of theoretical application. The Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) were the most frequently used frameworks, followed by the Stressor-Strain-Outcome (SSO) model, Social Capital Theory (SCT), and Connectivism Theory. Other frameworks included Uses and Gratifications Theory (UGT) and Theory of Planned Behaviour, reflecting interdisciplinary influences from psychology, sociology, and technology studies.

The Technology Acceptance Model (TAM) was prominently featured in several studies, either as a standalone framework, in extended forms, or in combination with other theoretical models. These studies primarily examined students' perceptions of the perceived usefulness and ease of use of social media in educational contexts. Examples include the works of Akgul and Uymaz (2022), Alismaiel et al. (2022), Al-Rahmi et al. (2022a), Muthuswamy and Bayomei (2023) and Watat and Bonaretti (2022). Similarly, the Unified Theory of Acceptance and Use of Techno-

-logy (UTAUT) was employed by Akgul and Uymaz (2022), Al-Rahmi et al. (2022b), and Ishak et al. (2022), demonstrating its relevance for examining technology adoption and user acceptance in educational settings. In contrast, Social Capital Theory served as the sole theoretical framework in studies by Heidari et al. (2023) and Sidhu et al. (2023). Some researchers also integrated multiple frameworks to enhance analytical depth. For example, Valdez and Datu (2023) examined the impact of Facebook usage intensity on academic self-efficacy through the dual lenses of Basic Psychological Needs Satisfaction Theory and the Stressor-Strain-Outcome (SSO) model. Additionally, Sabah (2023) used a research model combining multiple theoretical frameworks often used in technology adoption and learning systems research, such as TAM, Social Cognitive Theory, and Social Learning Theory.

Although the diversity of frameworks demonstrates intellectual breadth, the large number of studies without an explicit theoretical foundation point to a missed opportunity for stronger conceptual grounding. Greater integration of theoretical constructs could improve analytical coherence and strengthen the academic contribution of future research. Table 9 illustrates the distribution of theoretical frameworks used in the reviewed studies.

Table 9. Distribution of theoretical frameworks by frequency.

Frequency (Number of Articles)	Theoretical Frameworks
24	No Theory
5	Technology Acceptance Model
4	Unified Theory of Acceptance and Use of Technology
3	Connectivism Theory; Social Capital Theory; Stressor–Strain–Outcome Model
2	Constructivism Theory; Social Cognitive Theory; Task–Technology Fit Theory; Theory of Planned Behaviour; Uses and Gratification Theory
1	Basic Psychological Needs Satisfaction Theory; Black Feminist Thought Theory; Cognition System Theory; Communication Theory; Community of Inquiry Model; DeLone and McLean Information Systems Success Model (DM & ISS); Dialogic Communication Model; E-Learning Acceptance Model; Epistemological Attitude Model; Grounded Theory Approach; New Social Learning Theory; Relationship Marketing Theory; Self-Categorisation Theory; Self-Determination Theory; Social Customer Relationship Management; Social Identity Theory; Social Involvement Theory; Social Network Theory; Social Presence Theory; Sociocultural Theory; Sociotechnical Theory; System Approach Model; Technology Affordance Theory; Theory of Reasoned Action; Two-Step Flow Theory

Emerging trends in social media research designs (RQ2)

This section addresses the second research question, which explores emerging trends in research design related to social media use in higher education. Analysis of the 60 selected articles reveals six key thematic developments in r-

-ecent research designs related to social media use in higher education. Within the temporal scope of this review (2022–2024), these developments reflect the field's responsiveness to technological advancements, pedagogical innovation, and contextual challenges, while indicating areas receiving increasing scholarly attention and methodological experimentation in the current literature. These themes are summarised conceptually in Figure 6, which illustrates the six clusters of emerging research design trends identified across the reviewed studies and highlights how research in this area is evolving in methodological, conceptual, and analytical dimensions.

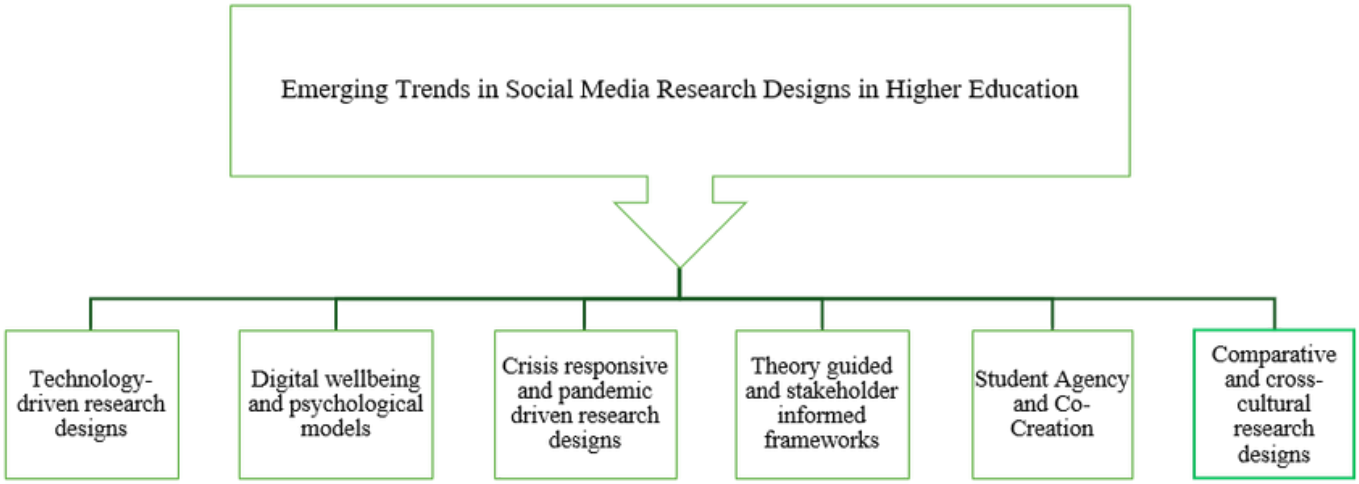

Figure 6. Emerging trends in research designs.

Technology-driven research designs

Research reflects a shift toward technology-driven methodologies that integrate artificial intelligence (AI), social media analytics, and large-scale digital data. Akgul and Uymaz (2022) exemplified this through a dual-stage SEM-ANN analysis combining structural equation modelling and deep learning to identify predictors of Facebook/Meta use in virtual classrooms. This hybrid approach enhances both precision and explanatory power in modelling student behaviour. Elhersh and Alqawasmeh (2024) demonstrated the reach of AI tools through sentiment analysis of over 18,000 tweets discussing ChatGPT. Using SentiStrength, Leximancer, and Voyant tools, they reveal public attitudes and ethical concerns, highlighting the role of real-time data analytics in educational discourse. Meanwhile, Gomez-Vasquez et al. (2024) applied social network and content analysis to the #AcademicTwitter community, uncovering how scholars engage in digital identity formation and academic branding. Collectively, these studies highlight a growing trend toward computational, scalable, and interdisciplinary research designs, where technology serves not only as a topic of inquiry but also as a methodological foundation.

Digital wellbeing and psychological models

Another key trend involves the increasing attention to digital wellbeing and mental health, particularly among students. Studies have begun to explore how social media use affects psychological states, emotional resilience, and academic outcomes. Singh et al. (2023) used the Stressor-Strain-Outcome (SSO) model to explain how compulsive social media use contributes to academic fatigue and performance decline. Similarly, Oliveira et al. (2023) and Xu et al. (2024) linked internet addiction and emotional wellbeing to students' patterns of social media engagement. These studies illustrate a trend toward research designs that integrate health and psychological frameworks, requiring methodological adaptations such as the inclusion of mental health inventories, stress indicators and technostress (Singh & Gayatri, 2022) and mixed-method tools to capture the emotional dimensions of digital engagement.

Crisis-responsive and pandemic-driven research designs

The COVID-19 pandemic served as a major catalyst for the transformation of research design in higher education. In contexts where formal learning management systems were unavailable, social media platforms emerged as vital tools for remote teaching and learning. Studies such as Sobaih et al. (2022b), Mdletshe et al. (2023), Muhammad and Nagaletchimee (2023), and Sobaih et al. (2022a) highlighted the educational use of platforms like WhatsApp, Facebook, and YouTube, especially in India, South Africa, Pakistan, and Egypt. These studies often utilised exploratory, participatory, and qualitative designs to document user experiences during emergency remote teaching. The COVID-19 pandemic thus not only redefined educational practices but also triggered flexible, context-sensitive methodological adaptations.

Theory-guided and stakeholder-informed frameworks

Another trend is the deliberate use of theoretical models and stakeholder perspectives in shaping research frameworks. Al-Hail et al. (2024) conducted a stakeholder analysis to evaluate the institutional use of social media in teaching and assessment. Their findings support the integration of participatory design and administrative perspectives into research frameworks. Likewise, Alismaiel et al. (2022) applied the Technology Acceptance Model (TAM) to explore students' behavioural intentions in adopting social media technologies during the COVID-19 pandemic. These studies highlight a movement toward the use of established theoretical models such as TAM and stakeholder theory, which not only guide data collection and analysis but also enhance the generalisability and theoretical robustness of educational research designs. Additionally, Alshammari et al. (2024) employed the e-learning acceptance model (e-LAM), which is based on the unified theory of acceptance and use of technology (UTAUT), to evaluate digital learning acceptance. These theory-driven designs enhance analytical robustness and policy relevance by aligning data collection with established conceptual models.

Student agency and co-creation

A growing number of studies emphasise students' roles as active participants in their educational experiences. Khan et al. (2023) highlighted the development of peer-driven learning networks among accounting students, while Almogren (2023) and Kalam et al. (2023) showed how social engagement, collaborative learning, and motivational factors affect performance. Moreover, Gulzar et al. (2021) demonstrated that students' use of social media correlates favourably with their creativity and academic engagement. The research conducted by Assefa et al. (2023) showed that social media and student engagement exert a substantial direct influence on academic performance. Ponera and Ngulube (2023) investigated the impact of policies on knowledge sharing via social networking sites among 171 postgraduate students in Tanzania. Barrera-Verdugo (2023) provided a generational lens, showing how younger students use social media not just for academic purposes but also to shape ethical and environmental values. These findings support the design of research methodologies that are student-centred and exploratory, and that prioritise qualitative tools such as interviews, reflective journals, and thematic analysis to investigate student agency in learning contexts.

Comparative and cross-cultural research designs

Finally, the global nature of social media has prompted a rise in comparative and cross-national studies. Al Musawi et al. (2023) conducted a comparative analysis of student social media use in Oman and Russia, while Slutskyi et al. (2023) examined institutional practices in Ukraine and the United States. These studies highlight how social media use varies across cultural, linguistic, and socio-economic contexts. In terms of research design, such studies necessitate multilingual instruments, country-level sampling strategies, and analytical methods capable of capturing cross-cultural variability. They also often involve collaborations across institutions and nations, emphasising the need for harmonised ethical review processes and standardised data collection tools.

Discussion

Overview of research diversity

The analysis of the 60 screened publications demonstrates the methodological breadth of social media research in higher education. Quantitative approaches dominate, with survey-based studies used extensively to examine social media usage patterns, perceptions, collaborative learning and academic performance. However, qualitative and mixed-methods research also occupies a significant space, reflecting the inherently complex and interactive nature of social media engagement in educational contexts.

The reviewed literature showcases a range of research designs, from basic descriptive analyses to more advanced modelling techniques such as structural equation modelling and path analysis. Frameworks such as the Technology Acceptance Model (TAM) appear frequently, either as standalone models or in combination with others, demonstrating the importance of theory-driven inquiry. Although certain methods, such as computational approaches (Reddy et al., 2023), thematic analysis and hybrid designs involving surveys, literature reviews, and experiments appear less frequently, they nonetheless reflect specialised approaches tailored to specific research objectives. Computational methods, for example, are increasingly relevant in the age of big data, offering enhanced capabilities for analysing large-scale digital interactions.

Notably, some studies lacked explicit articulation of their research design, requiring the classification of methodology based on data sources and discussion content. This challenge has been previously acknowledged in earlier literature, including Snelson (2016), who observed that qualitative and mixed-method studies in social media research often omit clear methodological classifications. Despite these challenges, the observed methodological diversity highlights the field's adaptability and evolving responsiveness to new research demands.

However, methodological diversity alone does not guarantee cumulative advancement. The predominance of quantitative approaches (68.33%), the heavy reliance on survey methods across 50 of the 60 reviewed studies, and the absence of explicit theoretical frameworks in 40% of publications indicate a structural concentration in research design. While such patterns may support generalisability, they also limit longitudinal depth, contextual richness, and conceptual integration. Systematic reflection on these prevailing design choices is therefore necessary to strengthen theoretical coherence, enhance methodological diversification, and support more robust cumulative knowledge development. In this sense, the present review functions not only as a descriptive mapping exercise, but as a critical assessment of methodological maturity within social media research in higher education. Stronger integration of theoretical frameworks can assist educators by providing conceptual models that explain how social media supports collaboration, motivation, and knowledge construction, thereby informing more deliberate pedagogical design when integrating social media into teaching activities.

Taken collectively, these patterns suggest that social media research within higher education remains in a phase of methodological consolidation rather than theoretical advancement. The dominance of cross-sectional survey designs, frequent reliance on student self-report data, and inconsistent integration of theoretical frameworks indicate that much of the field continues to prioritise measurement of technology use and perception over examination of pedagogical transformation or institutional practice, reflecting methodological concentrations identified in earlier reviews of social media research (Snelson, 2016; Costello et al., 2018). While this expansion has generated substantial empirical coverage, the resulting evidence base remains fragmented, limiting cumulative theory building. The findings, therefore, point to a field transitioning from exploratory technology-use studies toward a more mature stage requiring longitudinal, practice-oriented, and theoretically integrated research capable of explaining how social media reshapes teaching and learning processes over time.

From a teaching and learning perspective, these methodological patterns influence the type of pedagogical evidence available to educators and curriculum designers. The predominance of perception-based survey research means that much existing knowledge emphasises reported experiences of social media use rather than demonstrable changes in learning processes or outcomes, a concern previously identified in technology-enhanced learning research (Kirkwood & Price, 2014).Quantitative approaches can provide valuable large-scale evidence about patterns of social media adoption, student engagement, and learning outcomes across institutions, enabling educators and policymakers to identify scalable teaching strategies and evaluate the broader effectiveness of digitally mediated learning practices. As social media increasingly functions within networked learning environments shaped by collaborative and participatory learning processes (Greenhow & Lewin, 2016), greater methodological diversity may enable a richer understanding of how digitally mediated practices support teaching and learning in higher education.

Participant focus

The participant profiles across the studies reveal a predominant focus on undergraduate students, reflecting their central role as active social media users within higher education environments. This trend is consistent with the goal of many studies to understand student engagement, perceptions, and learning outcomes. A smaller but significant subset of research focuses on international students, as seen in studies such as Pang et al. (2024), which explores social media's role in supporting student adaptation and wellbeing in cross-cultural academic settings.

While student-focused research remains dominant, academic staff are comparatively underrepresented. Chugh et al. (2021) previously noted the paucity of research on academics' engagement with social media, and this observation remains relevant in the present study. A more balanced focus that includes both students and academic staff would offer a fuller understanding of how social media is integrated into institutional teaching, learning, and communication strategies. Indeed, the limited presence of academic staff in empirical studies constrains our understanding of how faculty perceptions and practices influence student engagement and the broader learning environment. This participant imbalance suggests that social media research within higher education remains predominantly learner-focused, potentially overlooking institutional decision-making processes and pedagogical practices shaped by educators and administrators. Expanding participant representation would therefore support a more holistic examination of technology adoption and integration within higher education systems. Greater inclusion of academic staff perspectives would also support the sharing of pedagogical practices, enabling educators to learn from how colleagues design, implement, and evaluate social media-supported learning activities.

Despite this imbalance, the inclusion of diverse participant categories, including academics, administrative staff, and studies using secondary social media data, reflects a growing commitment to research inclusivity. Studies involving mixed or non-traditional participant groups allow for a richer and more comprehensive view of social media's impact, addressing multiple stakeholder perspectives. This inclusivity enhances the relevance of research findings to varied institutional and educational contexts. Further research focusing on underrepresented learner groups, such as first-generation students or students from diverse cultural backgrounds, may also provide educators with insights into how social media can support more inclusive and equitable learning environments.

Geographical and contextual variation

Based on the institutional affiliation of first authors, the reviewed literature spans 26 countries, indicating broad international participation in social media research within higher education. A significant proportion of studies originates from Asian countries such as India, China, Saudi Arabia, and Malaysia, with notable contributions also from the United States, Australia, and several European nations. This diversity highlights the widespread academic and cultural relevance of social media across both developing and developed contexts.

Many studies are situated within discipline-specific domains. For example, Khan et al. (2023) and Muthuswamy and Bayomei (2023) explored social media use in business and management education, Low and Wong (2023) focused on engineering contexts, Salome et al. (2024) investigated applications within library science, and Sobaih et al. (2023) examined healthcare education. These disciplinary perspectives reinforce the view that social media research design is shaped not only by educational level or institutional type, but also by the pedagogical and communicative needs of specific academic fields.

Beyond demonstrating global participation, these geographical patterns also suggest that social media research in higher education may be shaped by regional policy priorities, digital infrastructure availability, and differing stages of educational technology adoption. The strong representation of developing and emerging economies may reflect contexts where social media functions as an accessible alternative to formal learning management systems, thereby influencing both research focus and methodological choice. Consequently, findings derived from dominant regions may not fully capture institutional realities elsewhere, underscoring the importance of context-sensitive interpretation when translating research insights across higher education systems.

Emerging trends

Several emerging patterns are evident across the reviewed studies. A notable trend involves the sustained emphasis on specific platforms such as Facebook and Twitter. Facebook remains a widely studied platform, confirming prior observations by Al-Qaysi et al. (2020). In the current study, WhatsApp also emerged as a prominent platform used for academic communication and peer interaction, reinforcing earlier findings by Hertzog and Swart (2018). These patterns suggest a continued reliance on familiar social media platforms for educational engagement, while also signalling a gradual shift toward more immediate and collaborative tools like WhatsApp. As academic environments evolve, future research should examine how these platforms support different forms of learning and communication, and how their roles may change in response to emerging educational technologies.

A further trend relates to the rise of COVID-19 pandemic-responsive research. Studies by Oliveira et al. (2023), Sobaih et al. (2022b), and Alismaiel et al. (2022) investigated the role of social media in sustaining academic engagement during COVID-19 disruptions. These works underscore the increasing reliance on digital platforms for remote learning, community building, and academic continuity, particularly during crises. The COVID-19 pandemic not only accelerated digital transformation but also influenced research design by introducing urgency, altering participant access, and emphasising real-time data collection.

The observed trends suggest that research is moving toward greater responsiveness to technological, psychological, and environmental shifts. The incorporation of AI technologies, mental health frameworks, and participatory designs reflects this evolution, pointing toward more integrated and dynamic research models in future studies. Collectively, these patterns indicate a gradual methodological transition from platform-centred usage studies toward more interdisciplinary and context-sensitive research designs. This shift suggests increasing recognition that social media operates as a socio-educational environment rather than merely a technological tool, requiring theoretically informed and methodologically diverse approaches to capture its educational implications.

Ethical considerations

Ethical considerations are also increasingly central to research design, particularly in studies exploring AI and digital surveillance. Elhersh and Alqawasmeh (2024) and Ivanytska et al. (2024) highlighted the ethical implications of AI tools such as ChatGPT in educational settings, calling for greater attention to academic integrity, data privacy, and the ethical boundaries of automation. This aligns with concerns raised by Johnson and Stone (2021), who examined the risks of academic dishonesty facilitated by social media.

As social media and AI technologies become further embedded in education, ethical research practices must evolve accordingly. This includes transparent consent procedures, platform-specific data handling protocols, and reflexive frameworks to assess the broader societal impact of technology-driven learning environments.

Contribution

Beyond methodological guidance for researchers, the findings of this review carry implications for teaching practice and curriculum development in higher education. Research design choices shape how evidence about social media-supported learning is generated, interpreted, and translated into pedagogical decision-making. The predominance of cross-sectional, perception-based survey studies suggests that instructional innovation is frequently evaluated through self-reported experiences rather than sustained observation of learning processes or curriculum transformation. Greater use of participatory, longitudinal, and practice-based research designs may generate forms of evidence more directly applicable to digitally mediated teaching strategies and curriculum development, consistent with educational design research approaches developed to bridge educational research and practice (Barab & Squire, 2009; Anderson & Shattuck, 2012; Reeves, 2006).

In this context, the selection of research design is influenced by various factors, including the nature of the research questions, study objectives, sample size, available technological resources, and the overall purpose of the inquiry.

As noted by Saliya (2023), research design complexity can be categorised across dimensions such as approach, purpose, technology use, and strategic orientation. This literature review contributes to the field by offering a structured overview that assists researchers in aligning methodological decisions with these contextual parameters.

Through the analysis of 60 research articles, this review confirms the methodological diversity within social media research in higher education. The studies encompass a wide range of stakeholder concerns, from institutional communication strategies to student wellbeing and engagement. The findings emphasise the importance of deliberate and well-justified methodological choices. Researchers must critically reflect on the rationale behind their selected methods and frameworks to ensure coherence with their study goals and research environments.

Although identifying appropriate methods and methodologies can be time-consuming, reviews such as this serve to streamline the process by aggregating and organising key trends, practices, and frameworks. This study thus functions as a resource for selecting appropriate sample sizes, participant types, analytical methods, and theoretical models. It enables more informed methodological planning and enhances transparency and justification in social media research designs.

Limitations and future research directions

While this literature review offers valuable insights, several limitations are worth noting. The dataset is restricted to articles published between 2022 and 2024 and those indexed in selected academic databases, which may limit the comprehensiveness of the findings. Furthermore, some established research approaches, such as longitudinal designs, ethnography, and experimental gamification, remain underutilised in the reviewed sample. This signals a methodological gap that future research could address to enrich longitudinal and behaviour-based understanding of social media in education.

The future of social media research in higher education lies in embracing advanced analytics and AI tools to better understand student engagement and support personalised learning. Equally essential is the establishment of ethical standards for data use, academic integrity, and responsible AI integration. Digital wellbeing is another critical concern, with future work needed to explore frameworks that foster healthy technology use.

Methodologically, there is a clear need for more longitudinal, ethnographic, and experimental designs, particularly those that can trace behavioural change over time. Faculty and academic staff remain underrepresented in the literature, despite their central role in digital pedagogy. Lastly, cross-cultural research should expand, using comparative methods to understand how local contexts influence social media practices and pedagogical outcomes.

Conclusion

This literature review offers a comprehensive examination of the methodological approaches employed in recent studies exploring social media use in higher education. The findings indicate a strong predominance of quantitative survey-based research, often focused on student populations. However, the contributions of qualitative and mixed-methods studies remain vital, particularly in capturing the nuanced and context-specific aspects of digital engagement, collaborative learning, and academic performance.

Quantitative methodologies, particularly surveys, were the most frequently employed research designs in the reviewed studies. Undergraduate students were the most common participant group, and studies originating from Asian countries comprised a substantial portion of the literature. Additionally, several papers omitted critical methodological details, such as sample size or research design classification, which presents limitations for synthesis and meta-analysis.

The review underscores the need for more diverse and theoretically grounded research designs to better understand the multifaceted roles of social media in higher education. Greater use of qualitative, longitudinal, and

mixed-method approaches will allow researchers to uncover deeper insights into student experiences, faculty engagement, and institutional adaptation. While this study offers valuable insights, it is limited to English-language, peer-reviewed articles published between 2022 and 2024. As such, it may not capture the full methodological spectrum or include regionally specific practices and innovations. As social platforms continue to shape digital learning environments, methodological rigour, ethical sensitivity, and contextual awareness will be critical in guiding impactful and trustworthy research.

Beyond informing methodological decision-making for researchers, the findings of this review also carry implications for teaching and learning practice in higher education. Understanding how social media research is designed helps educators and instructional designers evaluate the strength of existing evidence regarding digitally mediated learning environments. Methodologically diverse studies, particularly those incorporating longitudinal, qualitative, and participatory approaches, can provide richer insights into how social media supports collaborative learning, student engagement, and curriculum innovation. By highlighting current methodological concentrations and gaps, this review contributes to strengthening the evidence base that informs pedagogical decision-making in higher education.

References

*Akgul, Y., & Uymaz, A. O. (2022). Facebook/Meta usage in higher education: A deep learning-based dual-stage SEM-ANN analysis. *Education and Information Technologies, 27*(7), 9821–9855. https://doi.org/10.1007/s10639-022-11012-9

*Al Musawi, A., Bylieva, D., Osman, M., Ahmad, A., & Al-Moqbali, A. (2023). A comparative study of social media networks among higher education students. *Journal of Education and E-Learning Research, 10*(3), 513–520. https://doi.org/10.20448/jeelr.v10i3.4900

*Alam, M. Z., Ahmad, T., Abunar, S., & Naseem, M. (2024). Analysing the use and benefits of green communication in higher educational institutes. *International Journal of Data and Network Science, 8*(3), 1863–1872. https://doi.org/10.5267/j.ijdns.2024.2.003

*Al-Hail, M., Zguir, M. F., & Koc, M. (2024). Exploring digital learning opportunities and challenges in higher education institutes: Stakeholder analysis on the use of social media for effective sustainability of learning–teaching–assessment in a university setting in Qatar. *Sustainability, 16*(15). https://doi.org/10.3390/su16156413

*Alismaiel, O. A., Cifuentes-Faura, J., & Al-Rahmi, W. M. (2022). Social media technologies used for education: An empirical study on TAM model during the COVID-19 pandemic. *Frontiers in Education, 7.* https://doi.org/10.3389/feduc.2022.882831

*Almogren, A. S. (2023). Art students' interaction and engagement: The mediating roles of collaborative learning and actual use of social media affect academic performance. *Education and Information Technologies, 28*(11), 14423–14451. https://doi.org/10.1007/s10639-023-11735-3

Al-Qaysi, N., Mohamad-Nordin, N., & Al-Emran, M. (2020). Employing the technology acceptance model in social media: A systematic review. *Education and Information Technologies, 25*(6), 4961–5002. https://doi.org/10.1007/s10639-020-10197-1

*Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alturki, U., Aldraiweesh, A., & Almutairy, S. (2022a). Integrating the role of UTAUT and TTF model to evaluate social media use for teaching and learning in higher education. *Frontiers in Public Health, 10*. https://doi.org/10.3389/fpubh.2022.905968

*Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alyoussef, I. Y., & Crawford, J. (2022b). Social media use in higher education: Building a structural equation model for student satisfaction and performance. *Frontiers in Public Health, 10*. https://doi.org/10.3389/fpubh.2022.1003007

Al-Rahmi, W. M., Alias, N., & Shahizan, M. (2016). Social media used in higher education: A literature review of theoretical models. *INSIST, 1*(1), 38-42. https://doi.org/10.23960/ins.v1i1.17

*Alshammari, M. M., Al-Mamary, Y. H., & Abubakar, A. A. (2024). Revolutionising education: unleashing the power of social media in Saudi Arabian public universities. *Humanities and Social Sciences Communications, 11*(1). https://doi.org/10.1057/s41599-024-03313-w

*Alwreikat, A. (2023). Students' motivations for using Facebook for academic purposes: Qualitative approach. Dirasat, *Human and Social Sciences, 50*(1), 99–110. https://doi.org/10.35516/hum.v50i1.4391

Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research?. *Educational Researcher, 41*(1), 16-25. https://doi.org/10.3102/0013189X11428813

*Assefa, Y., Moges, B. T., & Kumar, T. (2023). Modelling the predictive effects of social media on the relationship between students' engagement and academic achievement in higher education institutions. *Cogent Education, 10*(1). https://doi.org/10.1080/2331186X.2023.2207801

Barab, S., & Squire, K. (2009). Design-based research: Putting a stake in the ground. *Journal of the Learning Sciences, 13*, 1-14. https://doi.org/10.1207/s15327809jls1301_1

*Barrera-Verdugo, G. (2023). The link between social media exposure and students' moral reasoning and environmental concern: A generational analysis in Chile. *Cogent Social Sciences, 9*(1). https://doi.org/10.1080/23311886.2023.2167570

Bode, L., Davis-Kean, P., Singh, L., Berger-Wolf, T., Budak, C., Chi, G., Guess, A., Hill, J., Hughes, A., Jensen, B., Kreuter, F., Ladd, J., Little, M., Mneimneh, Z., Munger, K., Pasek, J., Raghunathan, T., Ryan, R., Soroka, S., & Traugott, M. (2020). *Study Designs for Quantitative Social Science Research Using Social Media* (OSF Preprint). https://doi.org/10.31234/osf.io/zp8q2

*Capriotti, P., & Zeler, I. (2023). Analysing effective social media communication in higher education institutions. *Humanities and Social Sciences Communications, 10*(1). https://doi.org/10.1057/s41599-023-02187-8

*Chang, S., Gomes, C., Platt, M., Trumpour, S., McKay, D., & Alzougool, B. (2022). Mapping the contours of digital journeys: a study of international students' social networks in Australian higher education. *Higher Education Research and Development, 41*(6), 1821–1837. https://doi.org/10.1080/07294360.2021.1962812

Chugh, R., Grose, R., & Macht, S. A. (2021). Social media usage by higher education academics: A scoping review of the literature. *Education and Information Technologies, 26*(1), 983–999. https://doi.org/10.1007/s10639-020-10288-z

Chugh, R., & Ruhi, U. (2019). Social Media for Tertiary Education. *In Encyclopedia of Education and Information Technologies* (pp. 1–6). Springer. https://doi.org/10.1007/978-3-319-60013-0_202-1

Costello, E., Brown, M., Mhichíl, M. N. G., & Zhang, J. (2018). Big course small talk: Twitter and MOOCS – a systematic review of research designs 2011–2017. *International Journal of Educational Technology in Higher Education, 15*(1). https://doi.org/10.1186/s41239-018-0127-9

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Cutajar, M., Borg, C., De Laat, M., Dohn, N. B., & Ryberg, T. (2024). Deploying the affordances of social media: Envisioning a university-owned platform to foster networked learning. *Proceedings of the Fourteenth International Conference on Networked Learning, 2024.* https://doi.org/10.54337/nlc.v14i1.8004

*Dunmade, A. O., Adeyinka, T., Aramide, F. K., & Adewojo, A. A. (2023). Using WhatsApp as a medium of postgraduate instruction in a private university in Nigeria: fall-outs of the Covid-19 Pandemic. *Acta Scientiarum - Education, 45*. https://doi.org/10.4025/actascieduc.v45i1.65848

*Elhersh, G. A., & Alqawasmeh, H. K. (2024). Public sentiment and ethical considerations of ChatGPT in higher education: Insights from data analytics of conversations on platform X. *Journal of Infrastructure, Policy and Development, 8*(12). https://doi.org/10.24294/jipd.v8i12.7518

*Fuchs, K., & Aguilos, V. (2023). Technology-enhanced learning in higher education: A study of attitudes and perceptions toward social media. *International Journal of Information and Education Technology, 13*(3), 482–488. https://doi.org/10.18178/ijiet.2023.13.3.1829

*Gelashvili, V., Martínez-Navalón, J. G., & Gómez-Borja, M. Á. (2024). Does the intensity of use of social media influence the economic sustainability of the university? *Journal of Technology Transfer, 49*(1), 19–43. https://doi.org/10.1007/s10961-022-09984-4

*Gomez-Vasquez, L., Forstmane, L., Dias Da Silva, C. O., & Romero-Hall, E. (2024). Personal branding strategies in online hashtag communities: the case of #AcademicTwitter. *Research in Learning Technology, 32*. https://doi.org/10.25304/rlt.v32.3098

*Gonzalez, E. S., & Deng, X. N. (2023). Social inclusion: The use of social media and the impact on first-generation college students. *Journal of the Association for Information Systems, 24*(5), 1313–1333. https://doi.org/10.17705/1jais.00792

Greenhow, C., & Lewin, C. (2016). Social media and education: Reconceptualising the boundaries of formal and informal learning. *Learning, Media and Technology, 41*(1), 6–30. https://doi.org/10.1080/17439884.2015.1064954

*Gulzar, M. A., Ahmad, M., Hassan, M., & Rasheed, M. I. (2021). How social media use is related to student engagement and creativity: investigating through the lens of intrinsic motivation. *Behaviour and Information Technology 4*1(11), 2283–2293. https://doi.org/10.1080/0144929X.2021.1917660

Gupta, K. (2023). Research Design and Methods in Social Sciences Research. *In Social Research Methodology and Publishing Results: A Guide to Non-Native English Speakers* (pp. 94–116). IGI Global. https://doi.org/10.4018/978-1-6684-6859-3.ch007

*Hashemi, Y., Zarani, F., Heidari, M., & Borhani, K. (2022). Purposes of internet use among Iranian university students: exploring its relationship with social networking site (SNS) addiction. *BMC Psychology, 10*(1). https://doi.org/10.1186/s40359-022-00745-4

*Heidari, E., Salimi, G., & Mehrvarz, M. (2023). The influence of online social networks and online social capital on constructing a new graduate students' professional identity. *Interactive Learning Environments, 31*(1), 214–231. https://doi.org/10.1080/10494820.2020.1769682

Hertzog, P. E., & Swart, A. J. (2018). The use of WhatsApp in design-based modules. *2018 IEEE Global Engineering Education Conference (EDUCON)* (pp 445-450). https://doi.org/10.1109/EDUCON.2018.8363264

*Ibrahim, A., Ermatita, & Saparudin. (2022). Social customer relationship management as a communication tool for academic communities in higher education institutions through social media. *International Journal of Advanced Computer Science and Applications, 13*(5). http://dx.doi.org/10.14569/IJACSA.2022.0130548

Ibrahim, Z., & Marcaccio, S. E. (2023). Chapter 20 - Study population: Who and why them? In A. E. M. Eltorai, J. A. Bakal, S. F. DeFroda, & B. D. Owens (Eds.), *Translational Sports Medicine* (pp. 103–105). Academic Press. https://doi.org/10.1016/B978-0-323-91259-4.00105-3

*Iqbal, F., Ullah Jan, S., Anfal, S., & Ibrahim, Z. (2023). Impact of social media on academic performance of university female students of Khushal Khan Khattak University Pakistan. *Library Philosophy and Practice*. https://digitalcommons.unl.edu/libphilprac/7800

*Ishak, M. S., Mustaffa, M. F., Sarkowi, A., & Mustapha, R. (2022). Acceptance of YouTube for Islamic information acquisition: A multi-group analysis of students' academic discipline. *International Journal of Advanced Computer Science and Applications, 13*(7). http://dx.doi.org/10.14569/IJACSA.2022.01307108

*Ivanytska, N., Koliasa, O., Kovalevska, T., Matsera, O., & Tkachuk, T. (2024). Analysing the possibilities of implementation of AI and social networks in teaching foreign language students: Ukrainian universities case study. *Arab World English Journal, 1,* 306–318. https://doi.org/10.24093/awej/chatgpt.21

*Jitsaeng, K., Chansanam, W., Kanyacome, S., Detthamrong, U., & Li, C. (2024). Factors influencing social media platform engagement among Thai students: A quantitative study. *Emerging Science Journal, 8*(2), 539–556. https://doi.org/10.28991/ESJ-2024-08-02-011

Johnson, J. L., & Stone, M. (2021). The slippery slope of social media and academic dishonesty: A case review and discussion. *Nursing Forum, 56*(2), 444–447. https://doi.org/10.1111/nuf.12554

*Jordan, K. (2023). Academics' perceptions of research impact and engagement through interactions on social media platforms. *Learning, Media and Technology, 48*(3), 415–428. https://doi.org/10.1080/17439884.2022.2065298

*Kalam, A., Goi, C. L., & Tiong, Y. Y. (2023). Student motivations for social media use and their effects on academic performance- a meditational approach in emerging market. *Interactive Technology and Smart Education, 20*(3), 313–334. https://doi.org/10.1108/ITSE-09-2022-0115

*Khan, T., Kend, M., & Nguyen, L. A. (2023). Social media academic networking–insights from first-year accounting university students' experiences. *Higher Education Research and Development, 42*(2), 306–321. https://doi.org/10.1080/07294360.2022.2057449

Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is 'enhanced' and how do we know? A critical literature review. *Learning, Media and Technology, 39*(1), 6–36. https://doi.org/10.1080/17439884.2013.770404

*Low, W. W., & Wong, K. S. (2023). The status quo of Facebook usage among young generations in civil engineering education. *International Journal of Construction Management, 23*(9), 1471–1483. https://doi.org/10.1080/15623599.2021.1976453

Luft, J. A., Jeong, S., Idsardi, R., & Gardner, G. (2022). Literature reviews, theoretical frameworks, and conceptual frameworks: An introduction for new biology education researchers. *CBE– Life Sciences Education, 21*(3), 33. https://doi.org/10.1187/cbe.21-05-0134. https://doi.org/10.1187/cbe.21-05-0134

Matassi, M., & Boczkowski, P. J. (2021). An agenda for comparative social media studies: The value of understanding practices from cross-national, cross-media, and cross-platform perspectives. *International Journal of Communication, 15*, 207–208. https://ijoc.org/index.php/ijoc/article/view/15042

Mayeaux, A. S., & Olivier, D. F. (2022). Professional kinship using social media tools: Bridging and bonding to develop teacher expertise. *Journal of Applied Learning and Teaching, 5*(Suppl. 1), 27-34. https://doi.org/10.37074/jalt.2022.5.s1.3

*Mazurek, G., Gorska, A., Korzynski, P., & Silva, S. (2022). Social networking sites and researcher's success. *Journal of Computer Information Systems, 62*(2), 259–266. *https://doi.org/10.1080/08874417.2020.1783724*

McNeish, D. (2017). Challenging conventional wisdom for multivariate statistical models with small samples. *Review of Educational Research, 87*(6), 1117–1151. https://doi.org/10.3102/0034654317727727

*Mdletshe, S., Tlapana, T., & Hawkins-Mofokeng, R. (2023). Adoption of Facebook as a communication tool amongst university millennials in KwaZulu-Natal. *African Journal of Inter/Multidisciplinary Studies, 5*(1), 1–9. https://doi.org/10.51415/ajims.v5i1.1104

*Muhammad, R., & Nagaletchimee, A. (2023). WhatsApp and English language learning: Students' experiences during the pandemic in Pakistan. *MEXTESOL Journal, 47*(3). https://doi.org/10.61871/mj.v47n3-10

*Muthmainnah, Obaid, A. J., Raghda, R. S., & Khalaf, H. A. (2022). Adoption social media-movie based learning project (SMMBL) to engage students' online environment. *Educational Administration: Theory and Practice, 28*(1), 22–36. https://doi.org/10.17762/kuey.v28i01.321

*Muthuswamy, V. V., & Bayomei, S. M. S. (2023). Usage of social media from business students' perspective: The case study of YouTube. *Artseduca, 36*, 44–54. https://doi.org/10.6035/artseduca.3603

Nwabuko, O., Iwu, L., Njoku, P. U., & Nwamoh, U. (2024). An overview of research study designs in quantitative research methodology. *American Journal of Medical and Clinical Research & Reviews, 3,* 1–6. https://doi.org/10.58372/2835-6276.1169

*Oliveira, A. P., Nobre, J. R., Luis, H., Luis, L. S., Pinho, L. G., Albacar-Riobóo, N., & Sequeira, C. (2023). Social media use and its association with mental health and internet addiction among Portuguese higher education students during COVID-19 confinement. *International Journal of Environmental Research and Public Health, 20*(1). https://doi.org/10.3390/ijerph20010664

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S.,Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *International Journal of Surgery, 88*. https://doi.org/10.1016/j.ijsu.2021.105906

*Pang, H., Quan, L., & Lu, J. (2024). How does perceived overload influence international students' educational attainment? The mediating roles of social media exhaustion and academic anxiety. *Current Psychology, 43*(9), 7794–7808. https://doi.org/10.1007/s12144-023-04984-5

*Ponera, M. J., & Ngulube, P. (2023). Implications of policies on the use of social networking sites for knowledge sharing: Experiences from postgraduate students in higher education institutions in Tanzania. *Social Sciences and Humanities Open, 8*(1). https://doi.org/10.1016/j.ssaho.2023.100585

*Reddy, M., Nardelli, J. C., Pereira, Y. L., Oliveira, L. B., Silva, T. H., Vasconcelos, M., & Horowitz, M. (2023). Higher education's influence on social networks and entrepreneurship in Brazil. *Social Network Analysis and Mining, 13*(1). https://doi.org/10.1007/s13278-022-01011-6

Reeves, T. C. (2006). Design research from a technology perspective. In J. van den Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational Design Research,* 52-66, Routledge.

*Sabah, N. M. (2023). The impact of social media-based collaborative learning environments on students' use outcomes in higher education. *International Journal of Human-Computer Interaction, 39*(3), 667–689. https://doi.org/10.1080/10447318.2022.2046921

*Said-Hung, E., Martín-Gutiérrez, Á., & Marcano, B. (2024). A study of social media use for scientific communication and dissemination among Spanish education researchers. *Knowledge Management and E-Learning, 16*(2), 237–258. https://doi.org/10.34105/j.kmel.2024.16.012

Saliya, C. A. (2023). *Social research methodology and publishing results: A guide to non-native English speakers*. IGI Global. https://doi.org/10.1007/978-981-19-3780-4

*Salome, K., Oliva, I., Novosel, E., & Gilbert, S. (2024). Exploring social media as an information source in IL instruction. *College & Research Libraries, 85*(4), 479–496. https://doi.org/https://doi.org/10.5860/crl.85.4.479

*Shafiq, M., & Parveen, K. (2023). Social media usage: Analysing its effect on academic performance and engagement of higher education students. *International Journal of Educational Development, 98*. *https://doi.org/10.1016/j.ijedudev.2023.102738*

Sharma, V. K., & Begum, S. (2024). Academic researchers, come on! Integrate social media in pedagogy. *International Journal of Evaluation and Research in Education, 13*(5), 3284–3292. https://doi.org/10.11591/ijere.v13i5.29651

*Sharp, S. (2024). Conversation among Black women graduate students: Exploring social media self-expressions for the purpose of reclamation. *International Journal of Qualitative Studies in Education, 37*(3), 891–911. https://doi.org/10.1080/09518398.2022.2127026

*Sidhu, A., Singh, A., Qazi, S., & Bhalla, P. (2023). Social media, social capital, and knowledge sharing: Impact and implications for the higher education governance. *Corporate and Business Strategy Review, 4*(4 Special Issue), 227–234. https://doi.org/10.22495/cbsrv4i4siart3

*Singh, R., & Gayatri, M. (2022). A research investigation of techno stress in a learning environment enabled by information and communication technologies among Indian intellectuals. *NeuroQuantology, 20*(19), 1652–1663. https://doi.org/|doi:10.48047/nq.2022.20.19.NQ99148

*Singh, S., Gupta, P., Jasial, S. S., & Mahajan, A. (2023). Correlates of compulsive use of social media and academic performance decrement: A stress-strain-outcome approach. Journal of Content, *Community and Communication, 17*(9), 131–146. *https://doi.org/10.31620/JCCC.06.23/10*

*Sivoronova, J., Vorobjovs, A., & Raščevskis, V. (2024). Academics' epistemological attitudes towards academic social networks and social media. *Philosophies, 9*(1). https://doi.org/10.3390/philosophies9010018

*Slutskyi, Y., Panasenko, E., Kurinna, S., & Shcherbiak, I. (2023). Social, psychological, professional and academic features of the use of social media in the activities of higher education institutions. *International Journal of Media and Information Literacy, 8*(1), 228–239. https://doi.org/10.13187/ijmil.2023.1.228

Snelson, C. L. (2016). Qualitative and mixed methods social media research: A review of the literature. *International Journal of Qualitative Methods, 15*(1). https://doi.org/10.1177/1609406915624574

*Sobaih, A. E. E., Baquee, A., Palla, I. A., & Munshi, S. A. (2023). Perceived use behaviour of social networking sites among the healthcare students in India. *SAGE Open Nursing, 9.* https://doi.org/10.1177/23779608231201040

*Sobaih, A. E. E., Hasanein, A., & Elshaer, I. A. (2022a). Higher education in and after COVID-19: The impact of using social network applications for e-learning on students' academic performance. *Sustainability, 14*(9). https://doi.org/10.3390/su14095195

*Tachie, S. A., & Brenya, B. (2022). Lecturers' perceptions of students' social media exposure and its influence on mathematics performance. *International Journal of Research in Business and Social Science, 11*(6), 487–499. https://doi.org/10.20525/ijrbs.v11i6.1929

Thien, N. H., & Ngoc-Bich, V.-T. (2022). A statistical analysis of publication in Web of Science and Scopus-indexed journals in the humanities and social sciences at Vietnamese universities – A case study. *Tạp Chí Khoa Học, 19*(10). https://doi.org/10.54607/hcmue.js.19.10.3584(2022)

*Valdez, J. P. M., & Datu, J. A. D. (2023). Does Facebook intensity matter for academic self-efficacy? A path analytic approach. *Research and Practice in Technology Enhanced Learning, 18*. https://doi.org/10.58459/rptel.2023.18026

*Watat, J. K., & Bonaretti, D. (2022). A contextualization of the technology acceptance model to social media adoption among university students in Cameroon. *International Journal of Technology and Human Interaction, 18*(1), 1-18. https://doi.org/10.4018/IJTHI.297619

Woods, K., Gomez, M., & Arnold, M. G. (2019). Using social media as a tool for learning in higher education. *International Journal of Web-Based Learning and Teaching Technologies, 14*(3), 1–14. https://doi.org/10.4018/IJWLTT.2019070101

*Xu, Y., Razak, R. R. A., & Xiang, M. (2024). The impact of social media on the happiness of Chinese college students. *Heliyon, 10*(6). https://doi.org/10.1016/j.heliyon.2024.e28331

*Yousef, S., & Yousef, K. (2022). The impact of Facebook usage in education on students' academic performance at the University of Jordan. *Journal of e-Learning and Knowledge Society, 18*(1), 59–74. https://doi.org/10.20368/1971-8829/1135393