

Privacy on the Move: Understanding Educational Migrants' Social Media Practices through the Lens of Communication Privacy Management Theory

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This study explores how educational migrants in the U.S. experience shifting privacy dynamics on social media throughout their migration journey. It highlights how migrants balance connections with home and with non-migrant and migrant residents of host countries, a phenomenon that we term "triple presence." Using Communication Privacy Management (CPM) theory as a framework, the study draws on 40 semi-structured interviews to identify privacy practices across stages of migration. Before migration, privacy concerns are minimal; during migration, privacy is often compromised due to insecure networks; and after migration, migrants adopt segmented strategies to manage connections with home, diaspora, and local communities. However, challenges such as scams, political restrictions, and cultural differences persist, emphasizing the critical role of trust, cultural norms, and digital vulnerabilities in shaping privacy practices. We advocate for better literacy and privacy tools, focusing on trust indicators and privacy education to create safer and more inclusive digital spaces.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**; • **Security and privacy** → **Social aspects of security and privacy**.

Additional Key Words and Phrases: Educational Migrants, Privacy Management, Social Media Privacy, Communication Privacy Management (CPM), Double Presence, Triple Presence, Migration

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1 INTRODUCTION

In today's globalized world, migration is driven by diverse factors such as better living conditions, work opportunities, and educational prospects. Over 1.06 million international students migrated to the U.S. during the 2022-23 academic year, marking a 12% increase from the previous year [29, 52]. Despite prior studies on international students, the term "**educational migrants**" has not been explicitly defined in academic literature. Prior research has often explored this group indirectly, focusing on aspects like educational integration, economic outcomes, and policy implications. For example, Schneeweis [78] examined the integration of students with a migration background through international assessment data, while Dustmann [30] studied how education intertwines with migration decisions and outcomes.

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Lipura and Collins [58] emphasized the need to reframe existing narratives on international student mobility (ISM), critiquing the field for its narrow focus on privilege, youth, and Western-centric trajectories. Recent work by Weber [103] highlighted the nonlinearity of ISM patterns, showing that student mobility is shaped by a combination of origin-country development levels and destination-country characteristics such as GDP, academic rankings, and linguistic or colonial ties.

Building on these studies, we use the term "**educational migrants**" as **individuals who relocate primarily for academic purposes. They navigate the academic and social environments of their host country while maintaining social, cultural, and emotional connections to their home country.** This definition distinguishes educational migrants from other types of migrants, such as economic migrants or refugees [61, 82], whose primary drivers for migration differ. Educational migrants experience unique challenges, including balancing cultural and academic integration in their host country with the maintenance of transnational ties to their home country.

While these transnational ties can offer enriching experiences, they also introduce complex dynamics that have been insufficiently explored in the literature. For instance, the negotiation of privacy during the migration process is an area that has received little attention [75]. As educational migrants navigate their connections across countries, they must manage cultural expectations and evolving realities both in their home and host countries—an aspect that is deeply intertwined with privacy concerns. This gap is significant, given that privacy management plays a crucial role in how these individuals maintain relationships, manage disclosures, and adapt to new environments.

A central aspect of the educational migrant experience is what has been termed "**double presence.**" This concept describes the simultaneous engagement of migrants in both their host and home countries, encompassing emotional, cultural, and social ties that span national borders [12, 14, 24, 91, 95]. In this paper, we are expanding the concept to "**triple presence,**" because we have identified that migrants in the host country also are simultaneously engaging with the host country citizens and with other migrants in the host country separately. Far from being a simple division of belonging, "triple presence" represents an ongoing negotiation between three worlds—where migrants must navigate their obligations and connections to their home country while adjusting to academic, cultural, and social norms in their host country, and among different types of residents. This transnational experience, often facilitated by digital technologies, introduces distinct privacy challenges. Social media platforms, for example, enable educational migrants to stay connected across borders [20, 57, 68], but they also require careful management of what is shared, with whom, and under what circumstances, as cultural and social expectations vary across these engagement spheres. Despite the increasing recognition of this concept in migration studies, few have examined how this multiple-engagement context affects privacy management throughout the migration journey. While there has been research on challenges related to knowledge systems [87] and linguistic or cultural barriers [15], the intersection between these dynamics and privacy concerns remains largely underexplored. The negotiation of privacy is a crucial aspect of how educational migrants manage their lives across multiple cultural and social contexts, and this process has yet to receive adequate attention.

To address this gap, we draw on Communication Privacy Management (CPM) theory [65, 66], which offers a robust framework for understanding how individuals navigate privacy boundaries. CPM theory suggests that privacy management is a dynamic, ongoing process shaped by various contextual, relational, and cultural factors. At its core, the theory identifies three key elements that shape this process: i. privacy ownership, ii. privacy control, and iii. privacy turbulence. The first element, **privacy ownership**, posits that individuals view their personal information as something they own, meaning they have the inherent right to control access to it. This ownership allows individuals to decide who may access their personal information and how it is shared. However, when individuals choose to share their private information, they relinquish some degree of control, as the recipient becomes a co-owner of that information. This

sharing requires the establishment of **privacy control**, where the co-owners create mutually agreed-upon privacy rules to govern how the information will be used or further shared. Problems arise when these privacy rules are not clearly defined or respected, leading to **privacy turbulence**. This turbulence occurs when there is a breakdown in the communication or agreement between co-owners, resulting in confusion, conflict, or unintended disclosures of information [66, 106].

In the context of this study, CPM theory helps explain how educational migrants navigate these complex privacy dynamics. As they manage relationships and interactions across both their home and host countries, they must negotiate privacy ownership and control over their personal information. This negotiation becomes particularly challenging on social media, where differing cultural expectations and privacy norms come into play [101]. The concept of privacy turbulence is especially relevant, as educational migrants may experience disruptions in their privacy boundaries when navigating between different cultural contexts, which often results in uncertainty about how to manage personal information in a way that respects both sets of norms. Thus, CPM theory offers valuable insights into the ways educational migrants manage their privacy throughout their migration journey, particularly as they maintain transnational connections while adapting to the social and academic norms of their host country.

Our study addresses a critical gap in understanding the role of privacy management in the lives of educational migrants. Through semi-structured interviews with 40 participants from 14 countries, we investigate how educational migrants use social media to manage privacy during the three stages of their migration journey: pre-migration, transition and arrival, and post-migration. Specifically, we seek to answer the following research question:

- RQ: How do educational migrants in the USA manage their privacy on social media during different stages of migration?

Our findings reveal that privacy management strategies evolve significantly across these stages. Pre-migration, privacy ownership is relatively straightforward, with minimal disruptions. During the transition and arrival stage, migrants face heightened privacy turbulence due to reliance on insecure networks and unfamiliar platforms. Post-migration, they adopt segmented privacy strategies, balancing relationships with home, diaspora, and local communities. Yet, persistent challenges—such as scams, trust breaches, and digital fatigue—highlight gaps in platform-specific privacy support.

To our knowledge, this study is the first qualitative exploration of the social media practices of educational migrants from diverse cultural backgrounds. It makes the following contributions:

- A detailed understanding of how educational migrants manage privacy on social media across the migration journey
- Identification of unique privacy turbulence and challenges faced by educational migrants
- Insights into the role of cultural norms and trust in shaping privacy practices

2 BACKGROUND & RELATED WORK

2.1 Migration and Technology Use

Migration is a multifaceted phenomenon driven by various socio-economic, political, and environmental factors. According to the International Organization for Migration (IOM), over 281 million people globally are international migrants, including 117 million forcibly displaced individuals [13, 33, 80]. Migration can be voluntary, such as for work or education, or forced due to conflicts and crises. Regardless of the motivation, technology has become an essential tool in facilitating the migration journey, providing access to communication, social integration, and essential

resources [2, 5, 10, 19, 45, 47, 72]. Human-Computer Interaction (HCI) research has increasingly explored the role of digital technologies in migration. Digital platforms, particularly social media, are critical for migrants to stay connected with their home countries while adjusting to new environments [6, 8, 20, 86]. For example, Banulescu-Bogdan [10] demonstrated how refugees rely on digital platforms to maintain transnational ties, while Coles-Kemp et al. [20] emphasized how mobile technology serves both security and adaptation needs in the lives of newcomers. Similarly, Alencar [6] examined how social media facilitates language acquisition and the development of social capital among refugees. The study found that social networking sites played a crucial role in helping refugees learn a new language, adapt to cultural norms, and establish both bonding and bridging social capital. Additionally, the research highlighted the influence of government policies, host communities, and refugees' own agency in shaping their experiences with social media. However, most of these studies focus on refugees and asylum seekers, with limited attention to voluntary migrants, particularly those who migrate for educational purposes.

Recent HCI research has begun to explore privileged migrant groups, such as skilled professionals [43, 57, 68, 69]. For instance, Lingel et al. [57] studied transnational migrants in New York City and highlighted challenges like social media fatigue and cultural tensions. Pyle et al. [69] examined how Chinese-born technology professionals use social media, identifying both opportunities and constraints related to mobility aspirations. Despite these advances, there remains a research gap regarding the specific privacy concerns of some other migrant groups such as, educational migrants, who navigate unique identity and integration challenges.

2.2 Privacy and Social Media in the Migration Experience

Previous studies have clearly proven that social media plays a vital role in enabling migrants to make their migration journey and maintain their "double presence," a term referring to their simultaneous engagement with both their home and host countries [19, 20, 25, 26, 51, 57, 95, 104]. This concept contrasts with Sayad's notion of "double absence", which describes the alienation migrants often feel from both locations [77]. Our subsequent research has revealed a further subdivision of how migrants relate with the diaspora and the local communities in their host countries, so we are introducing the term "triple presence" with this paper.

While social media helps migrants sustain relationships and access information [25], it also introduces significant privacy concerns. Migrants frequently encounter privacy turbulence as they navigate diverse cultural norms, platform-specific constraints, and relational expectations [83]. According to Sannon and Forte [75] privacy risks can be particularly severe for marginalized groups (like, migrants), as privacy violations can disproportionately impact their security and well-being. This study also emphasized that racial and identity-based privacy concerns remain less explored and advocate for more inclusive research approaches. Wang et al. [100] further investigated whether existing social inequalities extend to privacy management on social media. Their study found that Latinx and Asian users reported higher privacy concerns than White users, while Black users exhibited greater confidence in managing privacy risks. These findings suggest that both socioeconomic status and perceived discrimination shape privacy behaviors, revealing broader structural factors influencing marginalized communities' digital privacy management.

For migrants, privacy risks are not just theoretical but have tangible, real-world consequences. Xu and Maitland [105] found that Syrian refugees in Jordan's Za'atari camp relied heavily on social media for communication but faced heightened security threats, including government surveillance and cyber risks. Similarly, Guberek et al. [38] and Steinbrink et al. [83] demonstrated that migrants are particularly vulnerable to online scams, identity theft, and algorithmic surveillance. These risks make privacy management a critical aspect of migrants' digital interactions.

To address these concerns, migrants adopt various privacy management strategies. Lampinen et al. [56] categorize these strategies into preventative approaches (e.g., restricting profile visibility, controlling shared content) and corrective measures (e.g., managing privacy breaches after they occur). However, most research on migrant privacy has focused on economic migrants and refugees, often overlooking the privacy experiences of educational migrants—a distinct group that faces unique challenges in balancing academic, social, and cultural identities while managing privacy across transnational networks. This gap highlights the need for further research into how educational migrants navigate privacy concerns throughout their migration journey.

2.3 Legal Frameworks and Cross-Border Data Governance

Legal frameworks governing digital privacy and data protection are critical in shaping how migrants experience, navigate, and manage their digital presence across borders. For migrants in particular, who move between jurisdictions with vastly different data governance cultures, these frameworks influence not only the security of their personal data but also their sense of control and digital agency [39, 55, 85, 89, 109].

Globally, there is a wide spectrum of data protection laws. The European Union’s General Data Protection Regulation (GDPR) is considered the gold standard, offering comprehensive rights such as data access, correction, erasure, and the right to be informed about data usage. It imposes strict obligations on organizations and has extraterritorial reach, potentially protecting EU population even when they access services outside the EU [35, 36, 73, 88, 98, 109]. China’s Personal Information Protection Law (PIPL) and India’s Digital Personal Data Protection Act (DPDPA) are newer frameworks that reflect a trend toward more rights-based governance, though implementation and transparency vary [39, 108]. In contrast, countries like the United States operate under a fragmented, sector-specific model, with privacy laws varying by state. Migrants arriving there may find fewer protections and less clarity about their digital rights, especially when interacting with social media platforms or institutional portals [11, 23, 27]. Similarly, Bangladesh and Iran present more fragmented or underdeveloped legal environments. While some privacy-related laws exist, such as Iran’s cybercrime law in 2009 [107] and Bangladesh’s draft Data Protection Act, enforcement mechanisms and user awareness remain weak [44].

These disparities contribute to a form of “regulatory dissonance,” [70] where migrants must continuously adapt their online behavior based on varying legal expectations across jurisdictions. As previous research has shown, this can affect migrants’ platform choices, privacy-seeking practices, and vulnerability to surveillance or profiling [17, 38, 46, 54, 83, 92, 93].

2.4 Communication Privacy Management (CPM) Theory and Educational Migrants’ Privacy Challenges

Since its inception in 1991, Communication Privacy Management (CPM) theory has provided a structured framework for analyzing how individuals regulate their personal information across different social contexts [62, 63]. According to CPM, privacy is governed by three key components: ownership rules (who has the right to control information), control mechanisms (how information is shared), and privacy turbulence (what happens when boundaries are violated) [65]. This theory has been widely applied to social media privacy research [31, 56]. CPM has been extensively used to study privacy management in interpersonal relationships, including family dynamics, health disclosures, and digital interactions. For instance, previous studies have explored how families navigate sensitive disclosures, such as parents discussing genetic diseases with children or individuals revealing some sensitive information to loved ones [64]. CPM theory offers a “privacy language” that helps individuals articulate and navigate these privacy dilemmas. It also sheds light on privacy breakdowns, explaining how people respond when their expectations for confidentiality are disrupted

[66]. Beyond interpersonal relationships, CPM has also been applied to human-technology interactions, particularly with the rise of AI-driven conversational agents. Research by Sannon et al. [76] examined how users perceive privacy violations in AI assistants, revealing that people are more accepting of data sharing within a single company but react negatively when advertisers gain access to their data. These findings highlight how different social situations and socially interactive technologies create new privacy vulnerabilities, aligning with CPM's notion of privacy turbulence.

CPM has also been applied to digital privacy management, particularly in contexts where individuals must balance personal disclosure with institutional oversight. Student-athletes, for instance, face privacy dilemmas due to the increasing monitoring of their social media activity by NCAA institutions. Hooper [42] found that many universities impose strict social media policies that restrict athletes' online behavior, creating boundary turbulence when personal content is scrutinized or censored. Similarly, social media algorithms play a crucial role in shaping privacy experiences by determining which content users see and how their personal data is used. Craig [22] explored how content filtering systems unintentionally reveal sensitive user information through recommendations and targeted ads, leading to unintended privacy breaches.

In migration contexts, the management of privacy becomes more intricate and fluid as individuals navigate a complex interplay of cultural norms, shifting digital landscapes, and increasing social surveillance [20, 38, 83]. Previous research has explored how migrants experience what is termed "privacy turbulence", a disruption in personal privacy boundaries that forces them to reconsider their strategies for disclosure and sharing [3, 38, 97]. For instance, Vitak [97] explored the impact of these dynamics on migrants, emphasizing how privacy management is not static but evolves in response to external pressures and internal shifts. Waters et al. [101] further examined how cultural expectations heavily influence privacy management practices among migrants, noting that these cultural norms shape how individuals are willing to disclose personal information both online and offline. Additionally, Lampinen et al. [56] discussed the complexities of collaborative privacy management, particularly within shared digital spaces, where migrants are tasked with negotiating visibility among various social groups. These studies, however, primarily focus on refugees and economic migrants, leaving the privacy challenges faced by educational migrants relatively unexplored.

Educational migrants represent a unique subset of voluntary migrants who move primarily for academic purposes [49]. Unlike refugees or economic migrants, they encounter distinct privacy challenges that arise from the intersection of their academic, social, and digital lives [1, 50]. Educational migrants have to manage a transnational identity, balancing their digital presence across both their home and host countries, which can lead to tensions in how they manage their online personas. In addition to the pressures of academic life—navigating institutional oversight, dealing with digital monitoring [99], and managing their professional reputations—educational migrants face evolving privacy needs as they adapt to new cultural norms while striving to maintain social connections in both their home and host countries. Despite the increasing number of educational migrants, this group remains significantly underexplored within the field of Human-Computer Interaction (HCI) research, especially regarding privacy concerns. Although there has been some research on the role of social media in the lives of educational migrants, much of this work has focused on issues of identity construction rather than privacy management. For instance, Lingel et al. examined how educational migrants use social media to negotiate and construct transnational identities [57], while Pyle et al. [68] explored how social media disclosures impact academic and social integration. However, these studies do not adequately address the privacy dilemmas unique to educational migrants. Key challenges include managing the expectations of multiple audiences, such as academic peers, family, and online communities. Educational migrants also struggle with balancing self-expression against different levels of surveillance in the new country after migration [7, 99]. Furthermore, they face the risks posed by algorithmic privacy, particularly the unintentional exposure of personal data during immigration

journey. Therefore, the aim of our research is to identify and better understand the privacy challenges experienced by this population as they move through different stages of their migration journey.

3 METHODOLOGY

To gain insights into the participants' thought processes and personal experiences relevant to our research questions, we conducted semi-structured interviews both in person and virtually via Zoom. Local participants were offered in-person interviews, while those from outside the area were provided with the option to participate virtually. The interviews took place in June and July 2024. The study was reviewed and approved by the university's Institutional Review Board (IRB), and researchers ensured that all participants gave informed consent. This section outlines the recruitment process, participant demographics, interview details, and the data analysis methods used in our study.

3.1 Recruitment

We conducted interviews with 40 international students, including 15 females and 25 males. Recruitment was facilitated through university research announcements from the international student office, along with flyers and ads on Facebook and LinkedIn. We also used snowball sampling [9], encouraging participants to refer others from their networks. Recruitment materials targeted educational migrants in the U.S. who were active social media users. To ensure eligibility, a screening survey was included in the advertisements, and only those who met the criteria were invited to participate. Demographic data were collected, and informed consent was obtained prior to scheduling interviews. Participants were then contacted via email to arrange interview times and locations.

3.2 Participants

We recruited 40 educational migrants, all aged 18 or older, who were active users of social media (Table 1). All participants identified as first-generation migrants, meaning they were the first generation of the family to migrate to the USA for educational purposes. The sample comprised 15 females (37.5%) and 25 males (62.5%), representing four distinct age groups: 8 participants aged 18-24, 28 aged 25-34, 2 aged 35-44, and 2 aged 45-54. Among the 40 participants, 16(40%) had completed their Master's degree, while 10 (25%) held Bachelor's degrees. 3 participants (7.5%) had completed their Doctoral degrees, and an additional 6 (15%) were in the process of earning their Doctoral degrees (marked with an asterisk in Table 1). 4 participants (10%) had a higher secondary degree (HS), and 1 participant (2.5%) had an Associate's degree. The participants came from 14 different countries, intentionally selected to explore potential differences in thought processes based on country of origin and cultural influences. The breakdown included 11 participants from Bangladesh (27.5%), 7 from India (17.5%), 4 from Iran (10%), 4 from Nigeria (10%), 3 from China, and 2 participants each from Mexico and Pakistan. Additionally, we had one participant each from Peru, Kenya, Kyrgyzstan, Georgia, Nepal, Taiwan, and Colombia.

Participants had spent varying lengths of time in the U.S., ranging from 6 months to over 3 years. This variation allowed us to examine the relationship between length of stay and social media usage. Previous research suggests that social media usage patterns evolve over time, with migrants who have resided in the U.S. for more than 3 years likely interacting differently with social media platforms compared to those who migrated less than a year ago [4]. In our study, 14 participants (35%) had lived in the U.S. for more than 3 years, 15 participants (37.5%) for 1 to 3 years, 10 participants (25%) for 6 months to 1 year, and 1 participant for less than 6 months.

In terms of top social media preferences, WhatsApp emerged as the most preferred platform, with 37 participants (92.5%) using it regularly. Other notable platforms included Instagram (31 participants), Facebook (26 participants),

Table 1. Participant Demographics: The table provides a detailed overview of participants' age group, gender, highest level of education (completed or in progress), country of origin, duration of stay in the USA, and top preferred social media platforms. The "Education" column shows the highest level of education attained by participants. However, some participants chose to share their ongoing degree status. An asterisk (*) next to "Ph.D." indicates those currently pursuing their doctoral degrees. In this table: WA = WhatsApp, IG = Instagram, FB = Facebook, WC = WeChat, LI = LinkedIn.

ID	Age	Gender	Education	Country of Origin	Duration in the U.S.	Top Preferred Platforms
P1	25 - 34	Female	Ph.D.	India	More than 3 years	WA, IG
P2	18 - 24	Male	HS	India	1 - 3 years	WA, LI
P3	25 - 34	Male	Master's	Nigeria	1 - 3 years	WA, IG
P4	25 - 34	Female	Bachelor's	Iran	More than 3 years	Telegram, IG, FB, Messenger
P5	25 - 34	Male	Ph.D.*	Iran	1 - 3 years	Telegram, WA, IG, FB
P6	25 - 34	Male	Bachelor's	China	1 - 3 years	WC, WA, Telegram
P7	25 - 34	Male	Bachelor's	Bangladesh	1 - 3 years	FB, Messenger, WA, IG
P8	25 - 34	Male	Master's	India	1 - 3 years	WA, IG, LI, FB, Messenger
P9	25 - 34	Female	Ph.D.*	Bangladesh	1 - 3 years	FB, Messenger, WA, IG
P10	25 - 34	Female	Master's	Bangladesh	More than 3 years	FB, Messenger, WA, IG
P11	25 - 34	Male	Bachelor's	Bangladesh	More than 3 years	WA, IG, FB, Messenger
P12	25 - 34	Male	Master's	Iran	6 months - 1 year	WA, Telegram, IG
P13	25 - 34	Male	Bachelor's	Bangladesh	1 - 3 years	WA, IG, FB, Messenger
P14	25 - 34	Female	Ph.D.*	Pakistan	6 months - 1 year	WA, IG, Telegram
P15	18 - 24	Male	HS	Peru	More than 3 years	Discord, WA, FB, Messenger
P16	25 - 34	Female	Ph.D.*	Bangladesh	1 - 3 years	WA, FB, Messenger, IG
P17	25 - 34	Female	Ph.D.	Bangladesh	More than 3 years	WA, FB, Messenger, IG
P18	25 - 34	Male	Master's	Bangladesh	More than 3 years	WA, FB, Messenger, IG, Reddit
P19	25 - 34	Male	Master's	China	6 months - 1 year	WC, WA
P20	25 - 34	Male	Master's	Bangladesh	More than 3 years	FB, Messenger, WA, IG
P21	25 - 34	Male	Master's	Bangladesh	6 months - 1 year	WA, FB, Messenger, IG
P22	25 - 34	Female	Master's	Bangladesh	More than 3 years	WA, FB, Messenger IG
P23	25 - 34	Male	Ph.D.*	Iran	6 months - 1 year	Telegram, WA, IG, FB
P24	25 - 34	Male	Bachelor's	India	6 months - 1 year	WA, IG, FB
P25	25 - 34	Male	Master's	Nigeria	1 - 3 years	WA, IG, FB
P26	35 - 44	Female	Bachelor's	Kenya	6 months - 1 year	WA, GroupMe, FB
P27	18 - 24	Female	Bachelor's	India	6 months - 1 year	WA, FB, Messenger, IG
P28	25 - 34	Female	Bachelor's	Kyrgyzstan	More than 3 years	WA, FB, Messenger, IG, Telegram
P29	45 - 54	Female	Master's	Nigeria	1 - 3 years	WA, IG, FB, Messenger
P30	18 - 24	Male	Master's	India	6 months - 1 year	WA, FB, IG
P31	25 - 34	Male	Master's	Nepal	1 - 3 years	WA, FB, Messenger
P32	35 - 44	Male	Master's	Taiwan	1 - 3 years	Line, WA, IG, FB, Messenger
P33	18 - 24	Male	Bachelor's	India	6 months - 1 years	WA, IG
P34	18 - 24	Male	HS	Georgia	1 - 3 years	FB, Messenger
P35	25 - 34	Male	Ph.D.	China	More than 3 years	WC, WA
P36	25 - 34	Female	Ph.D.*	Pakistan	less than 6 months	WA, IG
P37	25 - 34	Female	Master's	Nigeria	More than 3 years	WA, IG
P38	18 - 24	Male	Associate's	Mexico	More than 3 years	WA, FB, Telegram, IG
P39	45 - 54	Male	Master's	Colombia	1 - 3 years	FB, Messenger
P40	18 - 24	Female	HS	Mexico	More than 3 years	WA, Snapchat, IG

Messenger (21 participants), Telegram (8 participants), WeChat (3 participants), and minor usage of Discord, Line, Reddit and Snapchat (1 participant each).

3.3 Interview Sessions

Our interviews were conducted either in person, with some participants meeting in a usability lab and others in a library, or remotely via Zoom for those unable to attend in person. Each session began with an introduction to the research, followed by obtaining verbal consent to record the conversation. Participants were encouraged to think aloud and explain their responses. The interview covered their experiences before, during, and after migration, including preferred social media platforms and features used at each stage. We explored challenges such as changes in their views on online privacy after migration and vulnerabilities they faced as international students. Participants received a \$20 Amazon e-gift card, and interviews lasted between 23 to 65 minutes, averaging 46 minutes.

3.4 Data Analysis

All interviews were audio-recorded and transcribed using an automated platform, with transcripts reviewed for accuracy. We applied inductive qualitative coding to identify emerging themes and used thematic analysis [16] and inductive coding [74] to align with our research questions. The process began with familiarizing ourselves with the data, followed by open coding [48] to break down responses. We identified and refined initial codes into broader themes, such as maintaining connections with home countries, platform preferences, and cultural influences on these choices during migration. Both the first and second authors collaborated on coding, discussing discrepancies, and ensuring consistency through inter-rater reliability calculations [59]. This helped refine the codebook, which the first author then used to complete coding for the entire dataset.

4 RESULTS

This section presents our study findings organized into two main parts. First, we discuss how educational migrants use social media throughout the different stages of migration. Next, we apply the Communication Privacy Management (CPM) theory to analyze their privacy practices during these stages.

4.1 Social Media Use Across the Migration Journey

The migration journey is a complex and lengthy process, often shaped by the type of migrants, their backgrounds, migration history, intentions, destination, and long-term plans, such as permanent settlement or returning to their pre-migration country [18, 34, 84]. For our study, we observed that the migration journey of educational migrants can be categorized into three distinct stages. We drew on the stages outlined by the Bipartisan Policy Center in "Once Upon an American Dream: Exploring the Stages of the Immigrant Experience in America" and the stages of migration proposed by Friberg: 1. *The Preparation/Pre-Migration Stage*, 2. *The Transition & Arrival Stage (lasting up to the first three months)*, and 3. *The Settlement/Post-Migration Stage (usually begins after three months, when gradual integration occurs)* [34, 37]. Among our participants, we noted that their reliance on social media platforms varied significantly across these stages, playing a critical role in supporting their migration journey.

4.1.1 Platform Preferences. To understand how educational migrants utilize social media at various stages of their journey, we inquired about the platforms they currently use and have used in the past. We also explored the features they value most and the factors that shape their platform preferences throughout the different phases of migration.

1. The Pre-Migration Stage: Social media plays a crucial role throughout the entire migration journey, starting even before individuals arrive in their new destination. During the pre-migration stage, many participants relied on platforms like LinkedIn and Facebook to research universities and explore communities abroad. Of the 40 participants interviewed, 15 reported using social media as a primary resource for gathering information about their potential destinations. For instance, LinkedIn and Facebook emerged as the most frequently used platforms during this stage, while some participants also utilized university forums and WhatsApp for more personalized connections, especially for visa-related help, housing, or finding roommates. Many (17/40) participants also joined groups on Facebook or WhatsApp to gain advice from those who had already migrated, helping them navigate the complexities of the application process. Several (7/40) participants discussed how difficult it was to navigate the application process, and how useful social media was in answering questions related to this. Some of the information shared in these groups, particularly regarding migration logistics, was sensitive.

P1, for example, was added to a university's international student forum after receiving admission, which helped her establish connections with peers before her arrival. Similarly, P8 used Facebook and WhatsApp to decide which city to move to, emphasizing the importance of finding a community that felt culturally familiar. As P8 explained, *"I saw this city has a good Indian community. I wanted to be around people who were either culturally similar or in the same situation, like doing a master's program abroad. It was important for me to avoid the stress of adapting to a completely different culture alone."*

Notably, participants did not mention using other social media platforms at this stage, indicating a preference for LinkedIn, Facebook, and, in some cases, WhatsApp and university-specific forums. This proactive use of social media not only facilitated practical decision-making but also helped participants build a sense of belonging and reduce anxiety ahead of their journey.

2. The Transition and Arrival Stage: Social media continued to play a vital role during the transition and arrival stage of migration, with all 40 participants reporting that they relied on some form of social media during this period. For many, maintaining connections became essential, especially as they often did not have access to international SIM cards while traveling. Instead, they used platforms such as Messenger (14/40) and WhatsApp (11/40) to stay in touch with family and contacts. For instance, P11 described using Messenger during her transit to update her anxious family: *"I was traveling alone. At the airport, I was using Messenger to update my family, who were very anxious. I also contacted the person who would pick me up at the airport."*

Upon arrival, the focus of social media use shifted to balancing connections between the home and host countries. Many participants continued using platforms like WhatsApp, Facebook, and Messenger to stay connected with loved ones back home while simultaneously starting to build new networks in the U.S. The urgency to maintain family connections remained consistent over time, even for long-term migrants. For example, P4 and P28, who have been in the U.S. for over 10 years, still relied on social media to communicate with loved ones in their home countries. Preferences for specific platforms, however, often evolved. P4, for instance, transitioned from using Skype in the past to now favoring Telegram, while P35 switched from QQ to WeChat, reflecting its growing popularity within his network. This dual role of social media — helping migrants maintain existing relationships while fostering new ones — underscores its indispensable nature during the critical transition and arrival stage of migration.

Additionally, several (19/40) participants relied on local connections during the transition stage, particularly in the first few weeks after arrival. P7, for instance, stayed at someone's house and depended on them for guidance on where to buy furniture, groceries, and how to navigate the local community. This highlights the importance of social media not only for connecting with family and friends but also for facilitating a smoother settlement in a new country.

Table 2. Social Media Preferences of Educational Migrants Based on Community Ties in Origin Country, Integration with US Locals, and Connection with US Diasporic Communities to Maintain "Triple Presence" in Post-Migration Stage

Country of Origin	Ties in Origin Country	US Locals	US Diaspora
Bangladesh	Facebook&Messenger(11), WhatsApp(8), Instagram(5)	Instagram (5), WhatsApp (3), Facebook&Messenger(1), Slack(4), Discord(2), Reddit(1)	Facebook&Messenger(11), WhatsApp(1), Instagram(1)
India	WhatsApp (7), Instagram (5), Snapchat(2)	Snapchat(2), Discord(4), Facebook & Messenger (1), Instagram(1), Slack(1)	WhatsApp(7), Facebook & Messenger(3)
Pakistan	WhatsApp(2), Facebook& Messenger(2), Instagram(1)	Instagram (1)	WhatsApp(2), Facebook& Messenger(1), Instagram(1)
Nepal	Facebook& Messenger(1), Telegram(1)	WhatsApp (1)	Facebook&Messenger(1), WhatsApp(1)
Iran	Telegram(4), Instagram(3), WhatsApp(3)	Facebook&Messenger(3), Instagram(4), Slack(2), Snapchat(1), WhatsApp(1), Discord(1)	Telegram(4), WhatsApp(1)
China	WeChat(3), Telegram(1)	WhatsApp(1), Instagram(2)	WeChat(3)
Taiwan	Line(1), WhatsApp(1), Facebook& Messenger (1)	WhatsApp(1), Instagram(1)	Line(1), Facebook& Messenger (1)
Mexico	WhatsApp(2), Facebook& Messenger(1), Telegram(1), Instagram(1)	Discord(1), Snapchat(1), Instagram(1)	WhatsApp(1), Instagram(1)
Peru	WhatsApp(1), Discord(1), Facebook& Messenger(1)	Discord (1)	WhatsApp (1)
Colombia	WhatsApp(1), Facebook& Messenger(1)	Facebook & Messenger(1)	WhatsApp(1)
Nigeria	WhatsApp(4), Instagram(2), Facebook& Messenger(1)	Facebook&Messenger(2), Instagram(1)	WhatsApp(4)
Kenya	WhatsApp(1), Discord(1), Facebook& Messenger (1)	GroupMe(1)	WhatsApp(1)
Kyrgyzstan	WhatsApp(1), Telegram(1)	Instagram (1)	Facebook (1)
Georgia	Facebook&Messenger (1)	Facebook&Messenger (1)	Facebook&Messenger (1)

3. The Post-Migration Stage: For this stage, all of our participants shared that they heavily relied on social media to maintain communication with loved ones back home while also forming new relationships in the U.S. Our findings indicate that most participants used social media for a variety of purposes, including staying connected with friends and family in their country of origin, building relationships with U.S. locals and diasporic communities, and engaging with personal interests or professional development. This dynamic builds on the notion of "double presence" [12, 95, 96] but extends it further. Our findings reveal a more complex social reality that we describe as "triple presence," where migrants actively manage relationships across three intersecting spheres: ties in origin country, the locals in host society, and the diasporic networks within the host country. This diverse use of social media often involved navigating different privacy practices and boundaries based on the distinct contexts of each network. Table 2 highlights how participants preferred different platforms to connect with these varying networks.

Out of 40 participants, the vast majority (37) reported regularly using WhatsApp to connect with both people in their country of origin and those in the USA. They cited reasons such as its effectiveness, end-to-end encryption, and lower data consumption compared to Messenger [67]. One participant (P1) explained: "I use WhatsApp because of its

end-to-end encryption. It gives me peace of mind when communicating with my family." Another participant (P2) said: *"If the majority of my friends are using WhatsApp, then it's better for me to stick with it."*

In addition to WhatsApp, 26 participants reported using Facebook, 21 used Messenger, 8 preferred Telegram, and 3 relied on WeChat. Other platforms, such as Line (1 participant), Reddit (1 participant), and Discord (1 participant), served niche purposes depending on the participants' needs. Additionally, 18 participants use X (was Twitter), primarily for news updates.

For Facebook and Messenger, the primary reason participants used these platforms was that their friends, family, and communities were more active on them compared with other platforms. In contrast, those who preferred Telegram emphasized its strong reputation for security and privacy [79]. As P4 noted, Telegram is known for not sharing data with governments such as Iran, which resonates with the cultural contexts and heightened privacy awareness of certain users. This cultural sensitivity often influences platform choices. Similarly, P6 said: *"They[Telegram] have more secure technology to protect your private life and privacy."* P15 shared how Discord was particularly useful for staying connected with friends and family back home, especially for activities like screen sharing and watching movies together: *"My best friends and I love using it to watch or play something together, even though we're far apart. Same with my girlfriend—we use screen sharing so we can watch the same thing at the same time, despite the distance."*

For connections in the USA, 13 participants said they prefer iMessage due to its prevalence among iPhone users in the country. P29 noted: *"I have observed that Americans use iPhones more frequently...I think in U.S people prefer iMessage. Apple dominates the U.S. market, and many people have iPhones. In Nigeria, however, there's a lot of competition between Android and iPhone... In America, due to the economic system and resource availability, many people use Apple products, so iMessage is more prevalent here compared to other messaging platforms"*

Many (31) participants also mentioned using Instagram. Among them, 17 noted that Instagram allows them to connect with friends in the USA, where it is more popular than in their home countries. Additionally, Discord is more common in U.S. schools compared to their home countries, with 9 participants using it, while 7 participants use Slack to connect with peers. P26 mentioned using GroupMe, while P40 mentioned Snapchat. Both platforms, which were previously unused in their home countries, have helped them make new friends in the USA.

The participants expressed strong ambition regarding their careers. Most (36 participants) reported using LinkedIn regularly to achieve their academic and professional goals. Additionally, many mentioned using YouTube for personal entertainment or learning, rather than for maintaining a "double presence". Additionally, platforms like iMessage, Google Meet (used by 4 participants), and Skype (used by 3 participants) were noted as communication tools rather than social media platforms. For these reasons, these platforms are not included in Table 2.

4.1.2 Features Used. Our participants found the following features most valuable for staying connected throughout different stages of their journey: Voice/Video Calls and Direct Messages (voice, text, photo, video), both used by 38 participants. Specifically, video calls are highly valued as they allow participants to see the faces of their loved ones. P4 noted: *"I recall once we had this option to do video chatting. My mom said, 'Thank God we have this feature; now I can see you.'"*

Other significant features used by participants include Reactions/Likes (26 participants) and Reels/Short Videos (25 participants). P1 said: *"I use [Instagram] Reels a lot more because I feel they allow me to communicate certain points to my family effectively. For example, if there's a message about fitness or similar topics in a Reel, I can use it to convey that message to my mom. It feels like we are sharing the same moments and emotions together."*

A little more than half (21 participants) mentioned using the Sharing/Retweeting/Reposting and Stories features, followed by Posts (video, text, photo - 19), Comments (18), Notifications (16), and Status Updates (15 participants). Many participants said they preferred direct communication over posting updates or pictures for all their friends. While they enjoyed viewing updates from their friends, they chose to share selectively based on their communication with specific individuals.

Groups and communities were essential for the majority of participants (30), helping them both maintain connections with individuals from their home countries and integrate into new communities. For example, Bangladeshi students use Facebook groups, Indians prefer WhatsApp, Russian-speaking and Hispanic students use Facebook, and Iranians engage through Telegram. These groups assist participants in settling into new environments and celebrating cultural traditions. P7 stated: *"The Facebook group [for Bangladeshi students] definitely is very useful. I am currently the general secretary. We also have a public Facebook page, so if you search for Bengali students at our university, that page will appear. It serves as our primary line of communication. We assist new students with rides, finding apartments, and any other support they might need."*

Additionally, 14 participants find Facebook Marketplaces/Buy & Sell features particularly useful in the USA for settling into their new homes—a feature they did not use in their home countries but now rely on.

4.1.3 Strategic Disconnection: Managing Social Media Use. While social media is primarily used by educational migrants to stay connected, we observed instances of strategic disconnection during their migration journey. Two participants mentioned deleting their previous social media accounts, such as Facebook and Instagram, to reduce distractions and simplify their lives.

P3 chose to delete old accounts and create new ones for a fresh start, seeking to make life less complex. He said: *"I just needed my space. It was like a detox period for me. I didn't want people to know I wasn't in the country, and I didn't want to be in a situation where people were constantly in my space."*

This strategic disconnection highlights how some migrants consciously distance themselves from social media to better integrate into their new environment. Social media, therefore, becomes not only a tool for maintaining connections but also a means for managing relationships, and, at times, intentionally severing ties to support personal growth and integration.

The following Table 3 provides an overview of how participants utilize various social media platforms and features at different stages of their migration journey:

4.2 Applying CPM Theory to Social Media Practices During Migration Stages

In the Communication Privacy Management (CPM) theory, privacy is viewed as a dynamic and relational process where individuals make decisions about their personal information, determining how it is shared, protected, and managed across different situations [65]. According to Petronio and Child privacy ownership refers to the control individuals have over their private information and who has access to it. Privacy control involves how individuals regulate the flow of information and enforce boundaries based on context. Privacy turbulence occurs when individuals face challenges or disruptions in managing their privacy, such as unexpected breaches or confusion about privacy rules, leading to uncertainty. Using CPM theory, this section examines how educational migrants navigate privacy challenges across three key stages of migration: Pre-migration, Transition & Arrival, and Post-migration. Figure 1 illustrates the elements of CPM in each migration stage, along with the key influencing factors.

Table 3. Summary of social media use across the educational migrant’s migration journey, highlighting key stages, platform preferences, valued features, strategic disconnection

Key Insights	Primary Findings
Purpose of Social Media Use	<ul style="list-style-type: none"> • Pre-Migration: Social media used for researching universities and communities; Networking with peers; Practical guidance (visa, housing, etc.) • Transition & Arrival: Key for staying connected with family and contacts in to-be host country; Organizing airport pickups; Building new connections in the U.S. • Post-Migration: Maintaining connections with home; Building relationships in the U.S.; Professional development
Platform Preferences	<ul style="list-style-type: none"> • Most Popular in Pre-Migration: LinkedIn, Facebook, WhatsApp, university forums were mostly used (15/40) • Most Popular in Transition: Messenger (14/40), WhatsApp (11/40) • Most Popular in Post-Migration: WhatsApp (37/40) for global communication, Facebook (26/40) & Messenger(21/40) for community groups; Instagram(31/40) favored for building new U.S. relationships • Niche platforms offer specialized features such as Telegram (security-focused), Discord, Slack, and GroupMe (academic/professional needs).
Use of Features	<ul style="list-style-type: none"> • Video/voice calls(38/40), direct messaging(38/40), and reactions(26/40) highly valued • Groups and group chats (30/40) used for local community connections • Instagram Reels (25/40) favored for personal interactions • Marketplace (14/40) features useful for U.S. interactions.
Strategic Disconnection	<ul style="list-style-type: none"> • Some migrants choose to disconnect from platforms to avoid distractions • Viewed as a way to simplify life and reduce mental strain during migration

4.2.1 *Pre-migration*. In the pre-migration stage, participants exhibited a clear sense of **privacy ownership**, as they maintained full control over their personal information. Most participants shared details about their migration plans only with close family members or trusted friends, exercising caution about disclosing any personal information to others. This stage was characterized by limited co-ownership, where the information participants chose to share was tightly controlled, typically only disclosing it to a small, trusted circle. For example, one participant (P9) shared, “*I only told my family about my plans—no one else needed to know yet.*” This illustrates how participants carefully controlled who had access to sensitive information, prioritizing privacy in their decision-making.

Regarding **privacy control**, participants took an active approach to managing the information they shared online. They used online groups or forums to gather information about housing, university culture, and other migration-related matters, but they intentionally kept certain personal details, such as their visa status or precise migration plans, undisclosed. This demonstrates a clear exercise of control, where participants were able to regulate the depth of information they shared, avoiding public disclosure of more sensitive aspects of their migration journey.

As for **privacy turbulence**, this stage saw minimal disruption. However, there were rare instances when participants (3/40) encountered sensitive or uncomfortable questions in public forums, particularly those related to immigration status. These situations occasionally led to unease, but participants typically responded by avoiding sharing personal

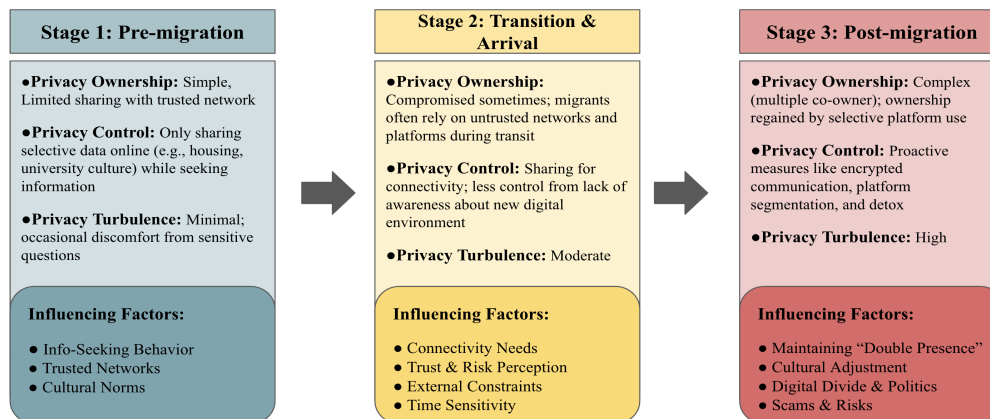


Fig. 1. This diagram illustrates the evolution of Communication Privacy Management (CPM) elements across the migration journey of educational migrants. The diagram highlights changes in privacy control, ownership, turbulence, and their influencing factors during the pre-migration, transition & arrival, and post-migration stages, reflecting how migrants navigate shifting privacy boundaries and adopt adaptive strategies to manage their digital lives.

details. Although there were moments of discomfort, the overall experience of privacy turbulence was relatively limited before migration.

4.2.2 Transition & Arrival. As participants transitioned into this stage, their **privacy ownership** began to shift, with an increasing reliance on co-ownership of personal information. In this phase, sharing personal details became more necessary, especially with strangers or new acquaintances. For instance, when participants arrived in the host country, they were sometimes required to share their location or itinerary with airport contacts or roommates, which created a sense of vulnerability. One participant reflected, *"I had to share my location with a stranger when I landed—it felt unsafe, but necessary."* This experience underscores the tension between the need for privacy and the practical requirements of navigating a new environment during migration.

Privacy control was more challenging during this phase due to the necessity of using public Wi-Fi networks, temporary accommodations, and unfamiliar digital platforms. These logistical challenges, rooted in the transitional nature of migration, led to compromises in privacy, not necessarily from changing privacy expectations, but from constrained access to secure infrastructure. Participants often found themselves prioritizing immediate needs, such as finding housing or navigating new surroundings, over safeguarding their personal information. This reliance on public networks for connectivity, whether for navigation or communication, often compromised their ability to control their data. The functional demands of the migration process—such as ensuring connectivity, managing logistics, and staying in touch with important contacts—took precedence over privacy concerns, making it difficult to maintain strict control over personal information.

The **privacy turbulence** during this stage was significantly more pronounced. Participants faced risks associated with insecure networks, where the lack of privacy protections could lead to potential breaches. The use of public Wi-Fi or reliance on temporary digital tools meant that personal data was more vulnerable to exposure or misuse. Moreover, participants often experienced accidental oversharing, especially when they were still adapting to the new communication norms or struggling to manage the details of their migration journey. Language barriers also contributed

to turbulence, as participants navigated digital environments and interactions in a language that was often not their first language, adding to their vulnerability and the likelihood of unintentional privacy violations.

Despite the turbulence, participants employed few privacy negotiation techniques during this phase. The immediacy of their needs, such as finding accommodation, making travel arrangements, and communicating with essential contacts, meant that privacy was often sacrificed in favor of functionality. Participants were more focused on getting things done and addressing their practical needs rather than considering the security or privacy implications of their online actions. This stage reflected a temporary compromise in privacy control, where the demands of migration led to a shift in priorities. P10 quote: *"When we come here to start a new life, we have so many things to handle and don't think about privacy and security threats in the first place."*

4.2.3 Post-migration. The post-migration stage is marked by an increasing complexity surrounding **privacy ownership** and **control**. Migrants face a unique set of challenges in managing their digital privacy, often grappling with a heightened sense of vulnerability due to changes in their digital environment and the resulting **privacy turbulence**. This turbulence is triggered by a combination of external and internal factors, which include unfamiliar security risks, changes in privacy policies across borders, and the psychological strain of navigating digital spaces while maintaining connections to both their home and host countries.

Most (26) participants felt that sharing personal information online meant losing ownership of that data. Also 23 participants reported experiencing **privacy turbulence** to share sensitive information on social media because they lacked alternative communication methods with their family overseas, leading to significant privacy concerns. For example, P2 described his experience with sharing his Aadhaar card number- a 12-digit identifier issued by the UIDAI (Unique Identification Authority of India) to Indian residents [21]. P2 said: *"You know, I had to share my Aadhaar card with my dad in India over WhatsApp...But I do not have any free alternative and I can't afford more secure paid options."* Similarly, P17, who was financially responsible for their family, frequently shared credit card details, highlighting the privacy trade-offs participants made to stay connected with loved ones. As P2 stated, *"It feels like I'm paying with my information."*

Several factors contributed to this turbulence, primarily due to security risks and the emotional strain migrants felt as they navigated their new digital realities. **Security risks**, such as scams and social engineering attacks, were particularly prevalent among migrants who were unfamiliar with local digital practices [81]. These experiences contributed to an increasing sense of vulnerability. For example, four participants reported being scammed on platforms like Facebook Marketplace because they were not aware of such frauds, as P5 shared: *"I bought a game through Facebook Marketplace. The seller asked for my address to deliver it. I gave him my address, and after about 30 minutes, he said he was in the parking lot. I went there, handed him the money, and he ran away!"* The lack of awareness of security risks amplified the feeling of losing control over their privacy.

In addition to external security risks, the **lack of security awareness and education** was another factor contributing to privacy turbulence. Many participants indicated that they did not initially prioritize digital security upon arriving in the U.S. and were unaware of the risks until much later. This gap reflects a contextual shift in expectations, where migrants are suddenly required to engage with more complex privacy decisions without adequate support or orientation. As P10 pointed out: *"When we come here to start a new life, we have so many things to handle that we don't think about security threats initially. We only learn about them informally from friends. I haven't noticed any awareness programs for international students here."* This gap in formal security education left many migrants vulnerable to phishing, identity theft, and other online threats, further complicating their ability to manage privacy in a new digital environment.

The constant **challenge of managing a multiple presence**, staying digitally connected with both family and friends back home and engaging with networks in their new host country, added to the privacy turbulence. Participants expressed the emotional and mental strain of maintaining this multiple online identity, particularly when it came to managing the demands of multiple social media platforms across different time zones. P17 explained: *"It's hard to balance online interactions with real-life connections, and sometimes it just feels overwhelming."* This emotional toll, combined with the pressure to stay constantly connected, led to social media fatigue. The strain of keeping up with digital interactions often led to unintended oversharing, where participants were more focused on maintaining connections than protecting their personal information.

Furthermore, many participants noted significant privacy turbulence resulting from the **lack of transparency regarding privacy policies** in their host country. Migrants often struggled with changes in how their personal data was collected, monitored, and used. For example, P12 mentioned: *"It's hard to tell if my data is being handled differently now. I just know I see more ads, which makes me worry about my privacy."* This uncertainty about data handling created a sense of instability, contributing to the overall unease migrants felt regarding their digital privacy.

Another contributing factor to privacy turbulence was the **digital divide and political restrictions** in migrants' home countries. Participants from countries with limited internet access, such as Bangladesh and Nigeria, faced difficulties in securing personal data due to unreliable connections and limited technological resources. As P9 noted: *"We don't have the same internet quality in my home country, and even here in the U.S., sometimes the connection isn't as reliable as I would like. It makes it hard to manage everything, especially with security."* This digital disconnection heightened the feeling of privacy turbulence, as migrants struggled to maintain control over their data in a foreign digital space.

Moreover, **political restrictions**, especially in countries like Iran and China, required migrants to use VPNs to bypass censorship and maintain communication with family. However, these tools, while necessary for staying connected, also introduced new risks and vulnerabilities. P4 explained: *"We have to use a VPN to communicate with our families in Iran. It makes it seem like we're connecting from another country, allowing us to bypass restrictions and access content."* While VPNs allowed migrants to maintain crucial connections, they also heightened the sense of digital instability, as they were uncertain about the potential risks these tools posed to their personal data security.

4.2.4 Countermeasures Taken to Regain Control Over Privacy. Despite the heightened privacy turbulence in the post-migration stage, our participants employed various countermeasures to **regain control** over their personal data and protect their privacy. These strategies reflect their efforts to adapt to new digital environments while safeguarding sensitive information.

A common and effective strategy employed by participants was **privacy segmentation**, where they tailored their digital presence to specific audiences. Nearly all participants (38) adopted this approach, segmenting their use of platforms like WhatsApp, LinkedIn, and Instagram to communicate with different groups: family back home, diaspora communities in the U.S., and local U.S. communities as mentioned in Table 2. This approach allowed participants to manage how much personal information they shared with each group. This strategy created **digital boundaries** that helped protect personal data from unwanted exposure. However, not all participants followed strict segmentation—P34, for example, used Facebook Messenger to stay in touch with both family and Russian-speaking communities in the U.S., yet they managed their privacy by avoiding public posts on Facebook.

Some (2) participants took **strategic disconnection** as a countermeasure to regain control over their digital lives. Some deleted or temporarily disabled social media accounts to minimize distractions and reclaim time for personal or

professional growth. P2 shared: *"I don't want any distraction... I deleted Facebook and Instagram because they were taking up a lot of my time. I needed to concentrate on my studies."* This approach, known as social media detox, was particularly useful for participants trying to regain focus in a new environment.

Encrypted communication was prioritized by many (37) of our participants to ensure the privacy of sensitive information. Encrypted platforms like WhatsApp were commonly used because they were perceived as more secure for sharing personal data. For instance, P6 expressed concern about the vulnerability of sensitive images, saying: *"Images with sensitive data could easily be saved, shared, or leaked by others."* To mitigate this risk, P6 took additional steps, like **covering their face with a sticker** in images before sharing them. Beyond encrypted apps, participants also utilized **privacy settings** to further protect their data. Many used **Instagram's "Close Friends"** feature to share content with a select group of people, while others adjusted settings on Facebook, LinkedIn, and WhatsApp to **limit the visibility** of their posts. These practices reflect migrants' proactive efforts to safeguard their privacy in an increasingly interconnected world.

Some participants, such as P1, took even more **proactive steps** to ensure secure communication with trusted family members. P1 taught their parents basic encryption techniques, such as breaking up sensitive information into multiple messages, to avoid exposing personal data in a single message. P1 explained: *"We don't share all the information in one message or call. Instead, we break it up. Sometimes I ask them to send the last three digits by email."* This proactive approach allowed participants to control how sensitive information was shared, reducing the risk of data leaks and enhancing privacy in everyday communication.

5 DISCUSSION

5.1 Cultural Influence on Privacy Management

Our findings reveal the significant role cultural factors play in shaping educational migrants' privacy management behaviors on social media. Migrants' platform preferences, content-sharing habits, and communication styles were strongly shaped by the digital practices and cultural norms of their home countries. Faklaris et al. [32] highlight the impact of social influences on privacy adoption, which aligns with our observations. For instance, Bangladeshi migrants in the U.S. heavily relied on Facebook and Messenger to stay connected with both their local and home communities, mirroring Facebook's widespread popularity in Bangladesh [102]. Similarly, WhatsApp emerged as the preferred platform among Indian, Pakistani, Nigerian, and Kenyan migrants due to its ubiquity and familiarity in these regions. Russian-speaking migrants from Georgia and Kyrgyzstan, as well as Spanish-speaking participants, favored Facebook for maintaining community ties. Taiwanese migrants leaned toward LINE, while Iranians gravitated toward Telegram [94], citing its advanced privacy features—a reflection of their heightened concerns over governmental surveillance stemming from strict internet regulations in Iran.

These norms were often shaped by deeper cultural values such as collectivism, respect for hierarchy, and the importance of familial bonds. For instance, collectivist cultures like those in South Asia and Latin America reinforced migrants' use of group-based communication channels such as WhatsApp or Facebook Groups to maintain family or community visibility. This aligns with CPM's concept of collective privacy ownership, where information is co-managed among members of a trusted group.

These platform preferences highlight how cultural familiarity provides a sense of continuity and trust, serving as a buffer against the unfamiliar privacy norms of host countries. Privacy ownership, in this context, refers to migrants' perception of their personal information as a resource they inherently control. However, this sense of ownership was

often mediated by the trust and comfort migrants had developed with specific platforms prior to relocation. For instance, Iranian migrants' preference for Telegram underscores how experiences of surveillance informed their heightened sensitivity to privacy risks, leading them to prioritize platforms perceived as secure.

CPM theory helps explain how these platforms acted as boundary structures—tools that migrants used to co-manage privacy with others. Migrants relied on the familiar boundaries they had constructed before migration, rather than renegotiating new ones within the host country's privacy norms.

While cultural familiarity provided a foundation for privacy control, it also constrained participants' ability to adapt to host-country platforms or norms. Platforms popular in home countries sometimes lacked robust privacy features or reflected lower levels of digital literacy among users, leaving migrants vulnerable to privacy turbulence in new digital environments. Migrants from regions where digital privacy is less emphasized faced additional challenges, such as limited awareness of privacy settings or an underestimation of online risks in the U.S. These findings underscore how cultural context both empowers and limits migrants' ability to navigate privacy boundaries, particularly in cross-cultural transitions.

5.2 Privacy Turbulence in Migration

The concept of privacy turbulence, as framed by Communication Privacy Management (CPM) theory, was especially evident in participants' struggles with new risks and evolving privacy norms. Many participants reported facing scams, fraud, digital restriction/isolation, and lack of awareness, particularly on platforms like Facebook Marketplace, where unfamiliarity with local contexts made them especially vulnerable. These experiences align with prior studies, such as those on Pakistani immigrants in the U.S., which found that first-generation immigrants perceived heightened risks of digital discrimination, surveillance, and isolation due to their identities as Muslim immigrants [90]. These tensions frequently led to self-censorship, as participants in our study also avoided certain online behaviors to mitigate the risk of negative experiences related to their immigration status. Such findings underscore the need for customized digital safety initiatives and platform designs that can support the unique needs of vulnerable migrant populations.

While many changes in participants' privacy practices were responses to shifting contextual norms, such as unfamiliar digital platforms or heightened surveillance, others were driven by the practical demands of relocation itself. The process of moving, including setting up new digital accounts, losing access to prior infrastructures, or temporarily relying on others for access (e.g., using friends' devices or public/shared Wi-Fi), also contributed to changes in privacy behaviors. Recognizing this distinction allows for a more nuanced understanding of how privacy turbulence arises not just from cultural shifts but also from logistical disruptions inherent to migration.

Our research expands on this existing body of literature by grounding the phenomenon of privacy turbulence within CPM theory, revealing how the migration journey itself shapes privacy management behaviors. While previous studies have explored privacy concerns within specific contexts—such as how Muslim-American women navigate intersecting identities, including Islamophobia, reputational harms within cultural communities [3]—our findings show how privacy turbulence evolves dynamically across the stages of migration. Similarly, research on undocumented migrants in Germany highlighted tensions between self-expression, group privacy, and self-censorship linked to immigration status, as well as a strong reliance on service providers despite limited awareness of government surveillance risks [38]. While these studies highlight shifts in contextual privacy concerns, our findings emphasize that the process of migration itself introduces unique disruptions, such as digital detachment, reliance on unfamiliar platforms, and gaps in continuity of access to trusted tools or communication channels that alter how migrants manage privacy day-to-day.

For migrants from countries with censorship-heavy environments, such as China and Iran, privacy turbulence was further compounded by their reliance on VPNs to bypass restricted access. This dependence added layers of complexity to their online interactions, demonstrating how privacy turbulence can emerge as a breakdown in understanding or adhering to privacy rules. For instance, migrants from these regions had to navigate the trade-off between the risks of government surveillance and the necessity of maintaining connections with their communities. These are examples of contextual shifts that reshape privacy expectations and risk assessments. Additionally, participants' experiences with privacy turbulence were influenced by gaps in digital literacy, language barriers [60], and differing privacy expectations between their home and host countries. For example, migrants who were accustomed to analog banking systems in their home countries often expressed significant distrust in digital banking practices in the U.S., resulting in heightened anxiety about data security. Participants from countries with high incidences of scams, such as Nigeria and Colombia, adopted cautious behaviors to safeguard their privacy, including avoiding sharing personal images online or relying on direct phone calls for sensitive communication rather than digital platforms. In contrast, several participants described logistical shifts, such as relying on unsecured public WiFi, or unfamiliar network providers during travel that unintentionally exposed them to new privacy vulnerabilities.

Another notable gap in participants' privacy management practices was their lack of awareness regarding legal data protection frameworks both in their pre-and post-migration countries. Despite operating across multiple digital jurisdictions, none of the participants demonstrated clear knowledge of privacy laws such as the GDPR, China's PIPL, or U.S. state-level protections, nor how these legal regimes might differ or shift as they crossed borders. This absence of awareness limited their ability to exercise their data rights, assess risks, or seek redress in cases of privacy violations. This finding reveals a critical gap: even comprehensive legal frameworks have limited practical utility when users are unaware of their existence, scope, or applicability. Legal protections cannot function effectively in isolation. They must be accompanied by educational outreach and platform-level transparency that translates complex legal requirements into actionable knowledge especially for transnational users like migrants, whose digital presence often spans multiple regulatory environments.

Complicating matters further is the fact that international platforms, while appearing uniform, may enforce different privacy policies across jurisdictions. For instance, WhatsApp operates under stricter data-sharing restrictions in India compared to other countries, due to local regulatory pressures and evolving data protection norms. Tech companies like Meta, Google, and Apple continue to face increasing scrutiny under India's proposed EU-like digital competition framework [71]. These jurisdiction-specific implementations can create additional confusion for migrants, who may assume continuity in platform behavior despite crossing legal borders.

These examples illustrate that privacy turbulence is not only a cultural and emotional phenomenon, but also a structural one-shaped by gaps in legal awareness, inconsistent platform transparency, and limited institutional support. By distinguishing between shifts driven by contextual privacy concerns and those caused by the mechanics of moving, we underscore the layered complexity of privacy turbulence. While prior literature has not explicitly connected these dynamics to CPM theory, our study highlights how privacy turbulence emerges not only from post-migration adjustments but also as a direct result of the migration journey itself. This finding underscores the importance of developing privacy and security tools that address the evolving needs of migrants at every stage of their migration experience.

5.3 Segmented Privacy and Triple Presence

In response to privacy turbulence, participants adopted innovative strategies such as segmented privacy practices to regain control over their digital environments. By compartmentalizing their social media use across platforms, participants managed distinct aspects of their lives with greater clarity. This aligns with prior research on individuals in life transitions [28, 40, 41]. For example, WhatsApp was often reserved for family communication, while Instagram, Snapchat were used to build host-country networks. This thoughtful segmentation not only enabled participants to balance the demands of their home and host cultures but also supported their ability to maintain the type of "double" presence observed in prior work [12, 95, 96].

However, our findings suggest that many participants also maintained ties with diasporic communities from their countries of origin within the U.S., adding a third layer to their social connectivity. This dynamic prompted us to create the term "triple presence," to more accurately describe how migrants simultaneously navigate connections with their home country, with non-migrants in the host country, and with other migrants.

Participants' choices to segment platforms were often influenced by security and privacy considerations, reflecting the challenges of navigating unfamiliar digital ecosystems. For instance, our participants from China described their continued reliance on WeChat to communicate with contacts back home, citing its perceived reliability and widespread trust among users from that demographic. Similarly, participants from countries with stringent censorship, such as Iran, turned to VPNs to access familiar platforms, such as Telegram, that offered privacy protections and a sense of security in light of government surveillance. These practices exemplify how migrants creatively negotiated privacy concerns within both cultural and technological frameworks.

In addition to platform segmentation, many participants turned to self-disconnection as a way to regain agency over their digital lives. By intentionally stepping away from certain platforms, they mitigated emotional strain and reduced exposure to privacy risks. As some of our participants noted that periodic breaks helped them feel less overwhelmed while adjusting to the fast-paced digital landscape of the host country. This strategy highlights the importance of mental well-being as migrants recalibrate their engagement with digital tools. These adaptive strategies reflect participants' resilience and agency in managing the tensions of an evolving digital presence that spans multiple cultural and geographic contexts. While prior work has explored "double presence" [95, 96], our study expands this concept by illustrating how "triple presence" further complicates privacy management across segmented platforms and emotional domains. These practices also underscore the challenges of operating in cross-cultural contexts without sufficient institutional or technological support.

The multiple-presence dynamic brings an emotional and cultural layer to segmented privacy practices. Migrants must continually renegotiate their privacy boundaries as they navigate new norms, technologies, and risks, which adds further complexity to their adaptation process. This phenomenon highlights the urgent need for culturally sensitive privacy tools and accessible digital literacy programs that account for the unique challenges migrants face at various stages of their journeys. By designing solutions that address the technical, emotional, and cultural dimensions of privacy, stakeholders can better empower migrants to engage with digital spaces confidently and securely.

5.4 Designing for Migrant Privacy: Addressing Turbulence Across the Migration Journey

Our findings clearly demonstrate how educational migrants are taking proactive measures to regain or maintain control over their privacy, particularly in the post-migration phase. This highlights the urgent need for privacy-conscious solutions tailored to the unique challenges faced by educational migrants. There is a critical need for design interventions

and comprehensive digital literacy programs to mitigate the privacy turbulence experienced by migrants throughout their migration journey. As migrants navigate new cultural and technological landscapes, they face a unique set of privacy challenges that are not adequately addressed by current digital platforms. To alleviate these challenges, platforms must incorporate culturally responsive and context-specific features, designed with the diverse backgrounds of their users in mind. For instance, integrating localized scam detection systems and providing in-app privacy education that is tailored to the migrants' unique contexts can significantly reduce vulnerability to fraud, phishing, and other privacy risks. Such interventions would help bridge the knowledge gap between migrants' prior digital experiences and the new platforms they encounter. Additionally, transparent trust indicators—such as privacy certifications, clearer data-use notifications, and intuitive privacy settings—can instill greater user confidence and empower migrants to manage their digital environments more effectively. These features not only build trust but also ease the emotional strain associated with managing privacy in an unfamiliar digital space.

To further support privacy management, we propose concrete technical interventions that go beyond interface design. For instance, AI-driven privacy assistants could offer real-time, context-aware privacy recommendations, such as alerts when sharing sensitive information, or prompts to adjust privacy settings based on behavioral patterns. These tools could be designed to recognize cultural nuances in privacy expectations and provide localized guidance in the user's preferred language. Additionally, platform-specific privacy updates like migration-mode settings could allow users to toggle between privacy profiles depending on whether they are in a high-risk or transitional phase of their journey. These modes could automatically limit data sharing, disable public visibility, or restrict location tracking. Integration of encrypted communication channels with built-in metadata minimization can also protect against targeted surveillance or exploitation. Together, these interventions would create a more responsive and proactive privacy infrastructure.

Beyond platform design, educational institutions and community organizations play a pivotal role in equipping migrants with the digital literacy tools necessary to safeguard their privacy. Tailored, culturally informed digital literacy programs can address the specific vulnerabilities faced by different migrant groups. These programs should not only focus on fundamental skills like identifying scams and managing privacy settings, but also emphasize the importance of understanding local digital norms and regulations. By co-designing these programs with migrant communities, we can ensure they reflect the real-world needs and challenges these individuals face. Such initiatives would promote resilience, helping migrants better navigate both the practical and emotional dimensions of privacy management in the digital world. To effectively mitigate privacy turbulence, collaboration between platform developers, policymakers, and educators is essential. Platforms must prioritize user-centric designs that consider the emotional and cultural complexities of migration. By embedding privacy-by-design principles, they can empower migrants to take greater control over their digital lives. Moreover, the integration of localized features—such as multilingual interfaces, culturally informed on-boarding experiences, and region-specific risk alerts—will bridge the gap between global platforms and the diverse needs of migrant populations. By addressing the specific needs of migrants at different stages of their journey, we can help reduce the emotional and practical burdens of privacy turbulence, enabling them to navigate new digital spaces with confidence and security.

6 LIMITATIONS AND FUTURE WORK

This study provides valuable insights into the privacy management practices of educational migrants in the U.S., but it is not without limitations. First, while our sample of 40 participants included individuals from diverse countries such as China, India, Nigeria, Mexico, and Taiwan—countries that represent a significant proportion of international students in the U.S. annually [53]—it may not fully capture the broader population of educational migrants. Geographic,

academic, and socio-economic factors likely influence social media practices and were not thoroughly explored. Future research could involve larger, more diverse samples, using online surveys or migrant community engagement to ensure broader representation. Additionally, self-reported data from interviews may introduce biases, such as recall or social desirability bias. Incorporating mixed methods like activity-log analysis could offer a more complete understanding of privacy behaviors and responses to online threats.

Further, the study focuses on first-generation educational migrants, limiting its generalizability to other migrant groups, such as second-generation migrants or those who migrate for employment or political asylum. Future research can examine the distinct privacy needs of these groups. The rapidly evolving social media landscape also poses a challenge, as platforms and tools may change over time. Longitudinal studies could track shifts in privacy practices and explore the effects of emerging technologies, such as AI-driven privacy tools and decentralized networks. Addressing these limitations will deepen our understanding of educational migrants' privacy management and help design more inclusive and secure digital environments.

7 CONCLUSION

This study examined the privacy management practices of educational migrants in the U.S., applying Communication Privacy Management (CPM) theory to understand how privacy ownership, control, and turbulence evolve during migration. Our findings highlight the dynamic nature of privacy management, shaped by cultural norms, platform trust, and digital vulnerabilities. Migrants relied on platforms like WhatsApp and Telegram for connectivity, but the absence of visible trust indicators often forced them to depend on social cues to assess platform reliability. Privacy turbulence, driven by scams, unfamiliar local norms, and the stress of navigating dual cultural expectations, emerged as a central challenge. Despite these hurdles, migrants demonstrated resilience through strategies like self-disconnection and platform segmentation, enabling them to regain control over their digital interactions. The study highlights the need for platforms to include culturally inclusive features, such as localized scam detection and privacy education, to better support migrants. Creating more secure and inclusive digital environments is crucial for helping migrants manage privacy issues and maintain well-being in a globalized world.

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A APPENDIX

A.1 Recruitment Script

This section describes the text we used for our recruitment process. This text was adapted for use in email campaigns, flyers, websites, and social media advertisements to recruit participants for the study:

Receive \$20 if Selected for Our Research Study on Social Media Experiences!

We are conducting a research study on the social media experiences of international students and are seeking participants to help us gain deeper insights into this topic.

About the Study: Our study, titled "Understanding Social Media Experiences of Educational Migrants," aims to explore how these students use social media to maintain connections with their countries of origin and integrate into their new environment.

Participant Criteria: We are looking for diverse participants who meet the following criteria:

- Aged 18 or older.
- Migrants who moved primarily for educational purposes.
- Users of any kind of social media.

- Can attend an in-person interview at the university campus or a virtual interview via video call for those outside the local area.

Study Details: The study will involve an in-person interview at the university campus for local students or a virtual interview via video call for those outside the area. Participants will be asked about their social media experiences before, during, and after moving to the USA. The interview will be audio recorded and is expected to last no more than one hour. Upon completion of the interview, participants will be rewarded with a \$20 Amazon e-gift card.

By participating in this study, you will help us develop a deeper understanding of the social media experiences of international students/educational migrants. Your insights will contribute to better support mechanisms and privacy protections for educational migrants on social media.

How to Get Involved: If you are interested in participating, please complete a brief eligibility survey to determine your eligibility and provide your contact information.

Thank you for your time and help!

A.2 Eligibility Survey Questions

- (1) What is your age?
 - 18 - 24
 - 25 - 34
 - 35 - 44
 - 45 - 54
 - 55 or older
- (2) What is your gender?
 - Male
 - Female
 - Non-binary / third gender
 - Prefer not to say
- (3) Are you an international student in the USA?
 - No
 - If 'No': Not eligible
 - Yes
 - If 'Yes': Show the next questions related to their social media use
- (4) Are you currently an active user of any type of social media? [e.g., Facebook, WhatsApp, Instagram, LinkedIn, WeChat]
 - No
 - If 'No': Not eligible
 - Yes
 - If 'Yes': Show the next questions related to their migration and social media use
- (5) Could you please provide the name of your country of origin? [open-ended text box]
- (6) What is the name of your current educational institution in the USA? [open-ended text box]
- (7) How long have you been living in the USA?
 - Less than 6 months

- 6 months to 1 year
 - 1 year to 3 years
 - More than 3 years
- (8) What is your highest level of education completed?
- High School Diploma/GED
 - Associate's Degree
 - Bachelor's Degree
 - Master's Degree
 - Doctoral Degree
 - Other (please specify)
- (9) Which of the following best describes your major field of study?
- Engineering
 - Business/Management
 - Computer Science/Information Technology
 - Social Sciences (e.g., Psychology, Sociology)
 - Natural Sciences (e.g., Biology, Chemistry)
 - Humanities (e.g., Literature, History)
 - Health Sciences (e.g., Nursing, Medicine)
 - Arts (e.g., Fine Arts, Performing Arts)
 - Other (please specify)

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