








Instagram Stories and Self-Expression among Nonverbal Individuals with Disabilities in Saudi Arabia: Implications for Inclusion

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ABSTRACT: This qualitative case study examines how nonverbal individuals with disabilities in Saudi Arabia use INSTAGRAM stories to express themselves, maintain social presence, and participate in online communities. Drawing on platform affordance theory, multimodality, and critical digital inclusion perspectives, the study addresses a gap in research on how ephemeral and multimodal social media features support communication for users who encounter substantial barriers to spoken interaction. Data were collected from twelve adult participants through semi-structured interviews and a three-month review of consented Instagram Stories artifacts. The data were examined using a hybrid thematic analysis that combined deductive coding aligned with the research questions and inductive coding of emergent patterns across interview accounts and story artifacts. findings show that stories functioned as a low-pressure daily diary, a multimodal communication space, and a means of confidence-building and peer connection. participants used images, short videos, music, emojis, stickers, captions, and interactive tools not as decorative features but as communicative resources for expressing emotion, achievement, frustration, and identity. However, participation was constrained by device and connectivity inequalities, limited compatibility with AAC and assistive technologies, interface complexity, privacy concerns, and fear of ableist harassment. the study contributes to educational technology and inclusive design by showing that digital inclusion for nonverbal users depends not only on access to platforms but also on meaningful, safe, and user-controlled participation. The article concludes with user-informed recommendations for accessible Story authoring, stronger moderation, assistive-technology compatibility, and collaboration with disability organizations.

Keywords: Digital inclusion, Instagram stories, Multimodality, Assistive communication, Inclusive design, Accessibility, Online safety, Augmentative and alternative communication (AAC), Saudi Arabia, Social participation.

I. INTRODUCTION

Social media platforms have become central spaces for identity construction, everyday storytelling, and community interaction [1, 2]. Among these platforms, Instagram Stories is particularly relevant because it enables users to share time-limited narratives through images, short videos, music, captions, emojis, stickers, polls, questions, and other interactive features. From an affordance perspective, these features do not simply transmit information; they shape what users perceive as possible, easy, risky, or socially meaningful within a platform [3, 4]. The ephemerality of Stories, which normally disappear after 24 hours, may reduce some pressures associated with permanent posting, while multimodal tools can widen the range of expression available to users whose communication is not primarily speech-based [5, 6].

For nonverbal individuals with disabilities, the communicative value of such platforms is especially important. In this article, the term "nonverbal" refers to people who experience substantial barriers to spoken communication; it does not imply an absence of language, intelligence, intention, or social agency. Many such individuals communicate through gestures, sign language, facial expressions, Augmentative and Alternative Communication (AAC), assistive technologies, symbols, typing, or combinations of these resources [9]. Yet everyday communication remains shaped by social expectations that privilege fast, fluent speech. In social, educational, medical, and institutional settings, the need for repeated clarification can produce misunderstanding, frustration, dependence on intermediaries, and reduced participation.

The Saudi Arabian context makes the topic both timely and theoretically significant. Official national indicators point to a highly connected digital environment, with the Saudi Internet Report 2024 indicating 99% internet penetration and mobile phones accounting for 99.4% of internet browsing [7]. At the same time, Saudi Arabia has launched a Digital Inclusion Program that emphasizes accessible digital services, assistive technologies, usability, and the involvement of persons with disabilities and older adults in service design [8]. These developments create a context in which digital participation is not merely a matter of private social media use but is tied to broader national commitments to inclusion, accessibility, and user independence.

Despite the growth of social media research, empirical knowledge remains limited in three respects. First, much work on online identity and self-presentation has focused on general users rather than people who communicate nonverbally. Second, disability and digital inclusion research has demonstrated the opportunities and risks of online participation, but it has less often examined Instagram Stories as a distinct multimodal and ephemeral environment. Third, little is known about how Saudi-based nonverbal users negotiate platform affordances, social expectations, online safety, and accessibility barriers in their everyday digital communication. Addressing this gap is important because access to a platform does not automatically produce inclusion. A user may technically reach Instagram while still being unable to author content easily, manage audiences confidently, use assistive technologies effectively, or participate without fear of harassment.

Accordingly, this study investigates how nonverbal individuals with disabilities in Saudi Arabia use Instagram Stories for self-expression and social participation. Rather than treating Instagram Stories as an entertainment feature, the study examines it as a socio-technical communication space in which platform design, multimodal resources, disability-related communication practices, and cultural context intersect. The purpose is not to generalize statistically to all users with disabilities, but to provide a rigorous qualitative account of how a specific group of users makes meaning through a widely used platform feature and what forms of support could make participation more inclusive. The study has three specific objectives:

- To examine how nonverbal individuals with disabilities in Saudi Arabia use the multimodal affordances of Instagram Stories - including images, short videos, text overlays, emojis, stickers, music, and interactive tools - to express thoughts, emotions, identity, and everyday experiences.
- To identify the perceived benefits and barriers associated with this use, including confidence, connection, peer support, accessibility, usability, privacy, harassment, device access, and compatibility with AAC or assistive technologies.
- To develop user-informed recommendations for inclusive design, educational technology practice, and disability support organizations, with attention to the Saudi context.

Based on these objectives, the study addresses the following research questions: (i) How do nonverbal individuals with disabilities in Saudi Arabia use Instagram Stories to express themselves and communicate with others? (ii) What benefits and challenges do they experience when using Instagram Stories for self-expression and participation? (iii) What user-informed recommendations can improve the accessibility, usability, and safety of Instagram Stories for nonverbal individuals with disabilities in Saudi Arabia?

By addressing these questions, this study contributes to the growing literature on digital inclusion, disability communication, and social media affordances by providing empirical insights into how nonverbal individuals with disabilities navigate and participate in digital spaces within the Saudi Arabian context.

II. SIGNIFICANCE AND CONTRIBUTION OF THE STUDY

The study contributes to scholarship and practice in three ways. Conceptually, it extends platform affordance research by showing how ephemerality, multimodality, visibility, editability, and interactivity are experienced by nonverbal users not simply as technical features but as communicative resources and constraints. The findings therefore move beyond a general claim that social media enables self-expression and instead specify the conditions under which Stories support or restrict the agency of users who rely on non-speech communication.

Methodologically, the study contributes by combining semi-structured interviews with analysis of consented Instagram Stories artifacts. This design is particularly important because ephemeral digital content may disappear quickly and because participants' account of self-expression can be strengthened by examining the actual forms of multimodal communication they use. The study therefore responds to calls for more careful methods for analyzing ephemeral social media content [5]. Practically, the findings have implications for inclusive educational technology, platform design, online safety, and disability support. They indicate that accessible participation requires more than adding isolated features. Inclusive design must consider AAC compatibility, motor and cognitive load, clear privacy controls, captioning and alternative text prompts, simplified reporting systems, and collaboration with disability organizations. These implications are relevant for developers, educators, policymakers, disability advocates, and institutions seeking to support equitable digital participation.

III. THEORETICAL FRAMEWORK AND KEY CONSTRUCTS

The study is guided by an integrated framework combining platform affordance theory, multimodality, and critical digital inclusion perspectives. Platform affordance theory directs attention to the relationship between technical features and user action. A feature such as a sticker, caption, poll, or audience selector becomes meaningful only in relation to what a user can do with it, how difficult it is to use, and what social consequences may follow [3, 4]. This perspective is useful for understanding why the same Instagram feature may empower one user while excluding another.

Multimodality provides the second component of the framework. Meaning in Instagram Stories is rarely produced through text alone; it emerges through the orchestration of visual, auditory, spatial, symbolic, temporal, and interactive modes [18, 19]. For nonverbal users, multimodality can be especially significant because images, videos, music, emoji sequences, stickers, and captions may become an alternative pathway for expressing complex emotions and everyday experiences. Critical disability and digital inclusion perspectives provide the third component. These perspectives resist treating disability as an individual deficit and instead examine how social, institutional, cultural, and technological environments produce or remove barriers [15-17]. From this standpoint, digital inclusion is not equivalent to owning a smartphone or having a social media account. It refers to meaningful, safe, autonomous, and socially recognized participation in digital spaces. Thus, the framework treats self-expression as a socio-technical achievement shaped by user agency, platform design, assistive-technology compatibility, online safety, social attitudes, and cultural expectations.

Table 1. Theoretical constructs and definitions

Construct	Working definition in this study	Relevance to the analysis
Platform affordances	Perceived possibilities for action that emerge from the interaction between platform features, user capacities, goals, and social context.	Helps explain how Story tools enable or restrict nonverbal communication.
Multimodality	Meaning-making through multiple modes such as image, video, sound, text, emoji, sticker, gesture, timing, and audience interaction.	Clarifies why Stories can function as a communication system beyond written or spoken language.
Inclusion	Meaningful, safe, and autonomous participation, not merely technical access to a platform.	Positions accessibility, privacy, safety, and recognition as core conditions for participation.
Self-expression	The ability to represent emotions, identity, everyday life, achievements, frustration, and social presence in ways that others can recognize.	Connects participants Story practices to identity, confidence, and belonging.

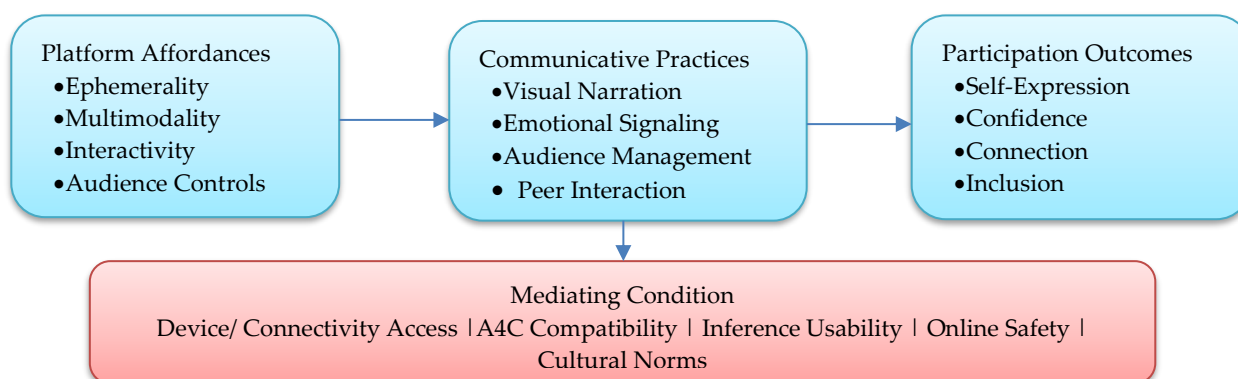


FIGURE 1. Conceptual model linking platform affordances, communicative practices, mediating conditions, and participation outcomes.

IV. LITERATURE REVIEW

1. SOCIAL MEDIA, IDENTITY, AND SELF-EXPRESSION

Research on social media has long emphasized that digital platforms are not neutral containers for communication. They are spaces where identity is continuously presented, negotiated, and interpreted by imagined audiences [1, 2]. Online self-presentation involves choices about what to show, what to conceal, how to address different audiences, and how to maintain authenticity across overlapping social contexts. For users with disabilities, these choices can be intensified because disability may be visible, invisible, disclosed, misunderstood, stigmatized, or strategically reframed in online interaction [13, 14].

Social media can therefore support both recognition and misrecognition. It may allow disabled users to challenge stereotypes, document everyday life, build community, and present themselves beyond medicalized or deficit-based narratives [14]. At the same time, the same visibility that enables recognition can expose users to surveillance, intrusive comments, objectification, or ableist harassment [25]. This

ambivalence is central to the present study because Instagram Stories may provide low-pressure self-expression while also producing safety concerns that restrict participation.

2. *INSTAGRAM STORIES AND EPHEMERAL MULTIMODAL COMMUNICATION*

Instagram Stories is a distinctive communication environment because it combines ephemerality with multimodality. Stories are temporary, sequential, and often produced through quick combinations of visual, textual, audio, and interactive elements [5]. Prior research has shown that Stories can feel more informal or authentic than permanent posts because they are linked to immediacy, everyday documentation, and lower persistence [6]. For users who fear judgment or who do not want every expression to remain permanently on a profile, ephemerality can reduce the pressure of perfect self-presentation. However, ephemerality also creates methodological and participatory complications. For researchers, Stories are difficult to collect and analyze without careful consent and documentation procedures [5]. For users, disappearing content may reduce long-term visibility and advocacy value. In the present study, this ambivalence is important: the temporary format can make sharing easier, but it can also make meaningful experiences vanish before they are recognized by others.

3. *DISABILITY, AAC, AND SOCIAL MEDIA PARTICIPATION*

People with complex communication needs often rely on AAC and other non-speech resources to participate in social life [9]. Research with AAC users has shown that social media can open valued opportunities for connection, communication, and autonomy, while barriers remain in technology access, interface design, support, and online risk [10]. Broader reviews of social media use by people with intellectual and developmental disabilities similarly identify opportunities for friendship, social identity, enjoyment, and self-esteem, alongside concerns about safety, accessibility, digital literacy, and support [11]. These findings suggest that social media participation should not be evaluated only by frequency of use. A more important question is whether users can communicate in ways that are understandable, self-directed, and socially meaningful. Instagram Stories may be particularly relevant for nonverbal users because meaning can be created through combinations of modes rather than through a single written text box. Yet this potential depends on accessible authoring tools, assistive-technology compatibility, and design that does not require fine motor precision or excessive cognitive load.

4. *DIGITAL INCLUSION, ACCESSIBILITY, AND ONLINE SAFETY*

Digital inclusion research has shown that inequality persists even in highly connected societies. Access to devices and the internet is necessary but insufficient; participation also depends on skills, affordability, accessible design, support networks, and social attitudes [26, 27]. Disability studies further emphasize that exclusion is often produced by environments that assume a narrow model of the "typical" user [15-17]. Applied to Instagram Stories, this means that an interface designed for rapid tapping, gesture-based editing, small icons, and continuous updates may unintentionally exclude users with motor, sensory, cognitive, or communication-related differences. Online safety is another inclusion condition. Recent HCI research has documented the ableist hate and harassment experienced by disabled content creators and has shown that platform moderation can fail to protect users from harm [25]. For nonverbal users, the consequences of harassment may be especially serious because reporting tools, blocking processes, and explanatory forms can themselves be inaccessible. Safety is therefore not a secondary issue; it determines whether users are willing to be visible at all.

5. *SYNTHESIS AND RESEARCH GAP*

The reviewed literature establishes that social media can support identity work, that Instagram Stories offers distinct ephemeral and multimodal affordances, and that people with disabilities experience both opportunities and barriers online. However, existing research has rarely integrated these strands to examine how nonverbal individuals with disabilities in Saudi Arabia use Instagram Stories as a communication environment. The theoretical gap lies in the limited connection between platform affordances, multimodal meaning-making, and critical disability perspectives. The methodological gap lies in the need to combine

interviews with analysis of ephemeral Story artifacts. The contextual gap lies in the limited evidence on how Saudi-based users negotiate digital inclusion, accessibility, online safety, and local communication norms. The present study addresses these gaps through a qualitative case study focused on the lived digital communication practices of nonverbal users.

V. METHODOLOGY

1. RESEARCH DESIGN

The study employed a qualitative case study design to examine how nonverbal individuals with disabilities in Saudi Arabia use Instagram Stories for everyday communication and self-expression. A case study approach was appropriate because the study sought an in-depth understanding of a contemporary practice within its real-life social and technological context rather than a statistical estimate of prevalence [21]. The case was defined as the use of Instagram Stories by nonverbal users with disabilities in Saudi Arabia.

2. PARTICIPANTS AND RECRUITMENT

Participants were selected through purposive sampling to ensure alignment with the research questions. Inclusion criteria were: being an adult living in Saudi Arabia; experiencing significant barriers to spoken communication related to disability; using Instagram Stories regularly or semi-regularly; and being able to provide informed consent independently or through an approved accessible consent procedure. Twelve participants took part in the study. Participants used different communication resources, including AAC devices, typing, sign language, gestures, facial expressions, and support from trusted communication partners where appropriate.

Recruitment was conducted through disability organizations, online support groups, and special education or rehabilitation networks in Saudi Arabia. This strategy enabled access to participants with relevant experience, but it also introduced a potential sampling limitation: individuals connected to such networks may have higher levels of digital access, family support, or disability-service awareness than isolated users. This limitation is acknowledged in interpreting the findings.

3. DATA SOURCES AND COLLECTION PROCEDURES

Two data sources were used. First, semi-structured interviews explored participants Story practices, reasons for posting, perceived benefits, barriers, privacy decisions, online safety concerns, and recommendations for platform improvement. Interviews were conducted either face-to-face or online depending on participant preference, accessibility needs, and availability. Communication modes were adapted to participants needs, including AAC-supported responses, typed responses, sign-supported communication, and additional response time. Second, the study reviewed consented Instagram Stories artifacts over a three-month period. Because Stories are ephemeral, no content was captured without explicit permission. Documentation occurred through participant-provided archives, screenshots approved by participants, or researcher notes prepared after consented viewing. The analysis focused on recurring forms and communicative strategies rather than on exposing identifiable content. Field notes recorded the types of modes used, posting patterns, interaction features, and contextual meanings discussed by participants.

4. DATA ADEQUACY AND SATURATION

Data adequacy was assessed through iterative comparison of interview transcripts, Story artifacts, and emerging codes. By the tenth interview, the main thematic categories had stabilized and no new major themes were emerging. The final two interviews and additional Story observations were used to test, refine, and confirm the developing thematic structure. This approach follows qualitative guidance that saturation is not a mechanical number but a judgment based on informational redundancy, analytic depth, and the stability of emerging categories [23].

5. DATA ANALYSIS

The study used a hybrid thematic analysis combining deductive and inductive coding [22]. Deductive codes were initially developed from the research questions and theoretical framework, including platform affordances, multimodality, accessibility, self-expression, inclusion, privacy, and safety. Inductive coding was then used to identify patterns emerging from participants own accounts and Story artifacts, including the use of Stories as a daily diary, the emotional role of music, emoji sequencing, audience management, assistive-technology friction, and self-censorship due to harassment concerns.

The analysis proceeded in six stages: (1) repeated reading of transcripts and field notes; (2) initial coding of interview and Story data; (3) comparison of codes across participants and data sources; (4) grouping of related codes into candidate themes; (5) review and refinement of themes through team discussion and return to the source material; and (6) final naming and interpretation of themes. The research team maintained analytic memos to document coding decisions, disagreements, and theme revisions. Differences in interpretation were resolved through discussion and by checking claims against the original data. This process strengthened credibility and dependability by creating an auditable analytic trail [24]. Because Instagram Stories are multimodal, analysis did not treat words as the only data. Story artifacts were interpreted by examining how modes worked together - for example, how a therapy image, a celebratory sticker, a particular song, and a short caption jointly communicated progress or emotion. Where meaning was ambiguous, participant interview accounts were used to avoid overconfident interpretation.

6. ETHICAL CONSIDERATIONS

The study involved human participants and personal digital content. All participants provided informed consent, including separate consent for any documentation of Instagram Stories content. Identifying information was removed during transcription and reporting, and data were stored securely with access restricted to the research team. Participants were informed that they could withdraw at any time without penalty. Particular care was taken not to reproduce identifiable Story content or sensitive disability-related information in ways that could expose participants to unwanted recognition.

VI. RESULTS

The analysis identified five interrelated themes. To strengthen analytical clarity, each theme is presented in terms of the descriptive finding what participants reported or what was observed in Story artifacts and the interpretive meaning what the finding suggests about multimodal communication, platform affordances, and inclusion. Figure 2 visualizes the thematic relationships.

Table 2. Summary of thematic findings

Theme	Descriptive focus	Illustrative evidence
1. Stories as a daily diary and presence	Stories documented daily life, emotions, interests, routines, and small achievements.	A participant described Stories as a daily journal and a way of saying, "I am here".
2. Multimodal meaning-making	Participants used images, videos, music, emojis, stickers, captions, and interactive tools to communicate beyond speech.	Music and emoji sequences were used to express emotions that were difficult to convey through text alone.
3. Confidence and connection	Posting Stories produced feelings of recognition, peer support, and gradual confidence.	Participants described feeling seen and receiving encouragement from others with similar experiences.

Theme	Descriptive focus	Illustrative evidence
4. Barriers to participation	Participation was constrained by device access, internet quality, AAC compatibility, interface changes, and fine motor demands.	One participant reported not getting full functionality through an AAC device.
5. Safety concerns and user-led recommendations	Fear of harassment, privacy invasion, and negative comments influenced what participants posted.	Participants requested stronger reporting, clearer privacy controls, assistive-technology compatibility, and disability-informed platform guidance.

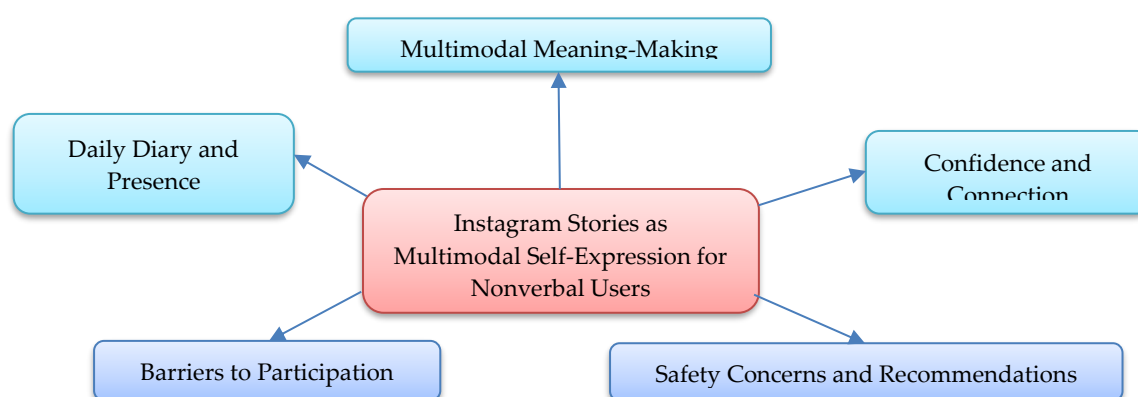


FIGURE 2. Thematic map showing how the five themes relate to Instagram Stories as a multimodal self-expression space.

1. THEME 1: STORIES AS A DAILY DIARY AND PRESENCE

Descriptive finding. Participants used Instagram Stories as a low-pressure venue for documenting ordinary life. Story posts included daily routines, moods, therapy activities, hobbies, family events, food, short outings, and small accomplishments. The 24-hour format was valued because it allowed participants to post without feeling that every update had to become part of a permanent profile. "Instagram Stories allow me to communicate. I document my daily life, passions, and thoughts there. It is like a daily journal for me. It is my way of saying, hey, I am here, and this is how I feel today".

Interpretive analysis. The diary function of Stories should not be read as trivial self-disclosure. For participants whose offline communication could be mediated by others or constrained by speech expectations, posting a Story became a way to assert presence directly. The statement "I am here" indicates that Stories functioned as a minimal but meaningful form of social visibility. Ephemerality made self-expression more manageable because the post did not have to remain permanently available for judgment.

2. THEME 2: MULTIMODAL MEANING-MAKING

Descriptive finding. Participants regularly combined visual, textual, audio, and symbolic elements to create meaning. Images and short videos often provided the situational context, while music, emojis, stickers, and captions signaled emotion, evaluation, or intention. Interactive features such as questions and polls were used to invite response without requiring participants to initiate long written exchanges.

"I enjoy adding music to my Stories. When words are not enough to express what I am feeling, music can say what I am feeling". "I use stickers and emojis to tell a story. Every emoji represents something I think or feel, and I organize them to communicate something".

Interpretive analysis. The participants use of multimodal elements shows that Instagram Stories did not merely supplement communication; it reorganized communication. Music could mark pride, sadness, motivation, or frustration; emojis could sequence thoughts; stickers could soften a difficult message; and images could reduce the need for lengthy explanation. For nonverbal users, meaning emerged from the relationship among modes. This finding supports the theoretical claim that multimodality expands expressive capacity when speech or conventional text-based communication is constrained.

3. *THEME 3: CONFIDENCE AND CONNECTION*

Descriptive finding. Participants associated Story sharing with increased confidence, especially when followers responded positively or when others with similar disabilities recognized the experience being shared. The increase in confidence was gradual rather than sudden. Participants described becoming more willing to post after receiving encouraging replies, emoji reactions, or supportive private messages.

Interpretive analysis. The confidence described by participants was not simply personal self-esteem; it was relational. Users felt more confident when their Stories were recognized as meaningful communication by others. Peer connection also had practical value: participants exchanged tips about easier ways to use Story features, accessible apps, captions, privacy controls, or AAC-supported posting. However, confidence depended on the quality of the audience. A supportive network encouraged visibility, whereas a hostile or indifferent audience could quickly produce withdrawal.

4. *THEME 4: BARRIERS TO PARTICIPATION*

Descriptive finding. Participants identified several barriers that affected how often and how confidently they used Stories. These included lack of suitable devices, inconsistent internet connections, data costs, difficulty navigating updates, small icons, time pressure, fine motor demands, and incomplete compatibility with AAC or assistive technologies. Participants with motor or cognitive processing differences reported that rapid interface changes could make previously learned routines difficult. "Accessibility is a major problem. I do not get the full functionality through my AAC device, and sometimes I have difficulties navigating it".

Interpretive analysis. These barriers show that digital inclusion cannot be reduced to platform availability. Even when a user has an Instagram account, participation may remain unequal if the authoring process is inaccessible. A Story feature that is simple for one user may require significant physical effort, cognitive load, or external assistance for another. The finding therefore supports a socio-technical understanding of inclusion: users need accessible devices, stable connectivity, predictable interfaces, and assistive-technology compatibility in order to participate autonomously.

5. *THEME 5: SAFETY CONCERNS AND USER-LED RECOMMENDATIONS*

Descriptive finding. Safety concerns influenced what participants posted and to whom they made content visible. Some participants avoided personal Stories because of fear of harassment, negative comments, privacy violations, or being mocked. Others used close-friends lists, limited disclosure, indirect symbolism, or neutral content to reduce risk. Participants also offered concrete recommendations, including stronger reporting tools, clearer privacy controls, improved blocking and filtering, better AAC compatibility, adjustable text size, caption prompts, and disability-informed help materials. **Interpretive analysis.** Safety operated as a gatekeeping condition for self-expression. Participants were not unwilling to communicate; rather, they weighed the value of visibility against the risk of harm. This finding is consistent with broader research showing that disabled users can experience ableist harassment and that platform moderation often fails to address disability-specific abuse. Inclusion therefore requires platform safety systems that are easy to understand, accessible through assistive technologies, and responsive to ableist forms of harm.

VII. DISCUSSION

1. *INSTAGRAM STORIES AS COMMUNICATIVE AFFORDANCES RATHER THAN DECORATIVE TOOLS*

The findings show that Instagram Stories affordances became communicative resources for participants. Features such as music, stickers, emoji sequences, captions, polls, and short videos were not peripheral

decorations. They enabled participants to express moods, experiences, achievements, and requests for interaction in ways that did not depend primarily on speech. This extends platform affordance theory by demonstrating that affordances are experienced differently depending on users' communication needs, assistive technologies, and social vulnerability.

For nonverbal users, the most valuable affordances were not simply those that increased visibility but those that made controlled, low-pressure, and emotionally rich communication possible. Ephemerality reduced some self-presentational pressure; multimodality expanded expressive options; and interactivity enabled engagement without lengthy verbal exchange. However, these same affordances could be undermined by inaccessible authoring interfaces or online risk.

2. MULTIMODALITY, IDENTITY CONSTRUCTION, AND RECOGNITION

The study also contributes to debates on identity construction online. Participants did not use Stories merely to show activities; they used them to construct recognizable identities as students, family members, friends, patients, achievers, advocates, and ordinary social actors. The multimodal format allowed participants to communicate affect and identity in ways that text alone might not capture. A therapy image paired with music could express effort and progress; a sticker sequence could communicate humor; a short caption could mark a social achievement.

This finding is important because nonverbal individuals are often positioned by others through deficit narratives. Instagram Stories gave participants a way to present themselves through chosen images, sounds, symbols, and audiences. Such self-representation can challenge narrow assumptions about disability, but only when the surrounding digital environment allows safe and accessible participation.

3. STRUCTURAL BARRIERS BEYOND PLATFORM DESIGN

Although platform design was central, the findings also point to broader structural barriers. Device affordability, internet quality, data costs, digital literacy, family support, access to AAC technologies, and societal attitudes all shaped participation. Cultural expectations surrounding privacy, public visibility, and disability disclosure also influenced how participants managed audiences. In Saudi Arabia, where digital transformation and disability inclusion policies are expanding, these barriers should be addressed through coordinated efforts involving platforms, educational institutions, rehabilitation services, disability organizations, and policymakers.

The study therefore cautions against viewing accessibility as a purely technical matter. A technically accessible button may still be difficult to use if the reporting process is intimidating, if users fear retaliation, if guidance is not available in accessible language, or if users lack support in learning new features. Inclusive participation requires a chain of support from infrastructure and devices to platform design, safety systems, user education, and social recognition.

4. IMPLICATIONS FOR INCLUSIVE DESIGN AND EDUCATIONAL TECHNOLOGY

Several implications follow from the findings. First, Instagram and similar platforms should improve compatibility with AAC devices, switch access, keyboard navigation, screen readers, voice alternatives, and simplified editing pathways. Second, authoring tools should include accessible prompts for captions, alternative text where available, adjustable text size, and templates that reduce fine motor and cognitive demands. Third, reporting and moderation systems should include disability-specific abuse categories, clearer feedback after reports, and easier blocking and audience-control options. Fourth, platform developers should co-design accessibility improvements with nonverbal users and disability organizations rather than relying only on generic accessibility assumptions.

For educational technology and disability support practice, the findings suggest that social media literacy programs should include Story authoring, privacy management, accessible content creation, online safety, and peer-support strategies. Educators and support professionals should not treat social media only as a risk; they should help users develop informed, supported, and self-directed participation. Such support is especially relevant for nonverbal individuals who may use multimodal platforms as part of their broader communication ecology.

VIII. CONCLUSION

This study examined how twelve nonverbal individuals with disabilities in Saudi Arabia used Instagram Stories for self-expression, communication, and social participation. The findings indicate that Stories served as a daily diary, a multimodal communication space, a source of confidence and peer connection, and a site where inclusion was shaped by accessibility, usability, safety, and cultural context. Participants used images, short videos, music, captions, emojis, stickers, and interactive tools as meaningful communicative resources rather than as decorative additions. The study also shows that digital inclusion is not achieved by platform access alone. Meaningful participation requires accessible authoring tools, assistive-technology compatibility, affordable and reliable connectivity, online safety, privacy control, and recognition of nonverbal communication as legitimate expression. These findings refine platform affordance theory by showing that affordances are not universal; they are differently available depending on user's bodies, technologies, communication practices, and social risks.

Several limitations should be acknowledged. The study involved a small purposive sample of twelve participants, and recruitment through organizations and support networks may have excluded more isolated users. The analysis was limited to consented Story artifacts, which means that some sensitive or private practices may not have been observed. In addition, because Stories are ephemeral, the documentation process may have influenced what participants chose to share during the study period.

Future research should examine larger and more diverse groups of nonverbal users, compare experiences across different platforms such as Snapchat, TikTok, and WhatsApp Status, and include longitudinal designs that track changes in confidence, safety practices, and platform use over time. Participatory and co-design studies are also needed to develop and test accessible Story-authoring tools, AAC-compatible interaction pathways, and moderation systems that address ableist harassment. Such work would strengthen the connection between inclusive educational technology, disability rights, and everyday digital participation.

Funding Statement

This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia (Proposal Number: KF261622).

Institutional Review Board Statement

This study was approved by the Institutional Review Board of King Khalid University, Saudi Arabia, under protocol number (RGP2/412/46), dated 30 May 2025. Informed consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.

Transparency

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. The study followed ethical practices during design, data collection, analysis, and reporting.

Data Availability

Because the data include personal social-media materials from a small and potentially identifiable population, raw data are not publicly available. Anonymized excerpts are reported in the manuscript, and additional de-identified materials may be made available from the corresponding author upon reasonable request and subject to ethical approval.

Competing Interests

The authors declare that they have no competing interests.

Authors Contributions

All authors contributed to the conception and design of the study, data analysis, interpretation of findings, and manuscript preparation. All authors have read and approved the revised manuscript.

Originality Statement

This manuscript is an original work of the authors and has not been published previously, in whole or in part. It is not currently under consideration for publication in any other journal or conference. All sources have been appropriately acknowledged, and the study complies with ethical standards of academic research.

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