# Opportunities and Challenges in Online Professional Learning of Educators through a WhatsApp Community of Practice

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## Abstract

This study investigates DIGIT, a WhatsApp-based Digital Community of Practice (CoP) for educators, examining its impact on the professional development (PD) dynamics of disciplinary-based professional learning community (DIPLC) facilitators. Employing qualitative methods, it analyzes responses from an online questionnaire completed by 32 members and in-depth interviews with 10 participants, to explore WhatsApp's complex role in both supporting and challenging professional engagement within a community of over 200 educators and facilitators. Findings highlight WhatsApp's critical features—ubiquity and accessibility, synchronous and asynchronous discussions, and immediate and informal communication—as key enhancers of learning. These attributes promote reflective practices, sharing, and a sense of belonging, vital for effective PD. Conversely, challenges identified include message overload, difficulties in knowledge preservation, the "Anonymity Paradox," isolation of newcomers, and the limitations of written communication, all of which can impede meaningful interaction and learning. Insights from CoP members shed light on the intricate effects of these factors on community dynamics. This research enriches our understanding of digital platforms like WhatsApp's potential to either facilitate or hinder educational PD,

underscoring the nuanced balance necessary for leveraging technology effectively within educational CoPs.

**Keywords:** Professional Development, Community of Practice, Disciplinary-based professional learning communities Facilitators, WhatsApp.

## Literature review

Professional development (PD) for educators, recognized as essential for enhancing knowledge, skills, and effectiveness, encompasses a range of training and learning activities (Guskey, 2000). Effective PD, as highlighted by Desimone (2009), supports new teaching techniques, understanding of student learning processes, and classroom management strategies, as further detailed by Darling-Hammond et al. (2017). Transitioning into the realm of Online Teachers' Professional Development (OTPD), this approach is characterized by its flexibility and personalization, catering to diverse educational needs while developing crucial digital competencies in today's educational landscape (Avidov-Ungar, 2024). Yet, challenges such as limited personal interaction and technological hurdles pose potential impacts on the efficacy of OTPD, as identified by Bragg et al. (2021).

Communities of Practice (CoPs) serve as a pivotal extension of OTPD, establishing collaborative networks that reinforce the exchange of experiences and strategies (Wenger et al., 2002). These communities embody a vital component in the evolution of OTPD, engaging members in a dynamic interplay of knowledge creation, sharing, and dissemination. Such collaborative endeavors not only refine teaching methodologies but also facilitate the integration of newcomers, significantly contributing to both individual and collective PD (Vangrieken et al., 2015;). Among the core elements of CoPs, peer learning and reflective practice are particularly noteworthy. These practices encourage educators to critically assess their teaching approaches and foster professional growth, supported by a foundation of mutual aid and emotional support (Avidov-Ungar et al., 2021). This holistic engagement within CoPs effectively advances the professional capabilities of educators, underscoring the importance of interactive learning environments in the realm of PD (Deniz & Bağçeci, 2023).

The transition of CoPs to online environments broadens the scope and modes of learning. Digital platforms, serving not only as tools for communication but also as mediators for expansive learning processes (Guberman et al., 2021), enable dynamic and interactive forms of learning. However, the success of online CoPs often hinges on the user-friendliness of technological platforms, emphasizing the role of intuitive interfaces in engaging members and ensuring smooth operation. Despite their benefits, online CoPs face unique challenges, such as participants' limited technological skills, the fear of negative feedback and feeling overwhelmed by the online environment, highlighting the necessity for effective management strategies that cultivate a culture of respect, openness, and trust (Dille & Røkenes, 2021).

WhatsApp, with its broad user base and user-friendly interface, has become a central tool in educators' professional learning networks, facilitating unparalleled collaborative learning opportunities and technological integration into pedagogy (Nasution & Munandar, 2023). The platform's unique combination of synchronous and asynchronous communication reinforces the exchange of experiential knowledge and pedagogical skills, cultivating a versatile environment conducive to reflection and deep inquiry. This, in turn, supports significant pedagogical skill augmentation, benefiting educators and learners alike (Blonder & Waldman, 2019; Moodley, 2019; Scherz et al., 2022). Additionally, WhatsApp's immediate and informal messaging features significantly improve peer learning, contributing to professional growth, trust, emotional support,

and a sense of belonging among educators, accentuating its critical role in promoting effective educational interactions (Cansoy, 2017; Cronjé & van Zyl, 2022).

However, despite its widespread adoption and utility, WhatsApp encounters specific challenges that can impede its effectiveness in educational settings. The platform's primary design for social communication occasionally complicates the organized and systematic delivery of educational content, potentially requiring supplementary tools for optimal functionality (Nasution & Munandar, 2023). Issues such as message clutter and the blurring of professional boundaries further present significant hurdles, necessitating clear communication protocols and the appointment of group moderators to maintain professionalism and manage discussions effectively (Bouhnik & Deshen, 2014; Blonder & Waldman, 2019; Cronjé & van Zyl, 2022). These measures are crucial for overcoming the platform's inherent limitations and ensuring its continued relevance and efficacy in educational contexts.

Nonetheless, research into WhatsApp's challenges has predominantly focused on contexts involving direct interactions between teachers and students or instructors and learners (Bouhnik & Deshen, 2014; Klein et al., 2018). Remarkably, few studies have explored its use within communities akin to the one under investigation in this study. This oversight underscores the distinctive contribution of the present research, highlighting the imperative for in-depth analysis of WhatsApp's role in specialized educational communities and its overarching influence on PD.

**The context of the research:** DIPLCs (disciplinary-based professional learning communities) are PLCs that focus on a specific discipline or role within the educational system. DIGIT, a WhatsApp-based CoP established in October 2021, focuses on enhancing PD for DIPLC facilitators. The CoP integrates academic theory with practical applications, following a fan model (Aricha & Marzel, 2021).

Facilitators play a crucial role in DIPLCs, impacting the depth and effectiveness of the community's discussions and practices. These facilitators are tasked not only with understanding deep pedagogic content knowledge (PCK) in the relevant discipline (Shulman, 2013), but also applying specific skills to maintain community engagement and support continuous learning (Borko et al., 2014; Louca & Skoulia, 2019; Mendels & Berglas-Shapiro, 2021).

With 218 members as of December 2023, including DIPLC facilitators, Ministry of Education officials, and academic researchers, DIGIT leverages WhatsApp for regular communication, augmented by monthly Zoom webinars and annual face-to-face meetings. These activities are designed to ease a shift towards networked and social thinking among DIPLC facilitators, addressing their specific professional needs.

## Research Objective

This research aims to examine the characteristics of DIGIT as a WhatsApp-based CoP for educators and DIPLC facilitators, focusing specifically on the impact of WhatsApp's characteristics on professional learning and development within this community. The study addresses the ways WhatsApp's characteristics support or hinder the professional learning and development of the educators and DIPLC facilitators who take part in DIGIT.

## Methodology

### Research Method

This research utilized a qualitative approach with a case study of DIGIT to explore the experiences of its members and moderators. This approach was chosen for its ability to provide an in-depth

understanding of the intricacies of DIGIT's activities and member interactions (Creswell et al., 2007; Hamilton & Corbett-Whittier, 2012).

## Research Population

The study involved three distinct participant groups: (1) 32 community members who completed a semi-structured online questionnaire, (2) six community members interviewed in-depth, and (3) four DIGIT moderators also interviewed in-depth. The detailed demographic and professional background information provided herein refers solely to the community members. These participants brought a rich diversity of teaching experiences, ranging from less than five years to over twenty years. Their roles spanned across the educational spectrum, including district and national instructors, professional teachers, subject coordinators, lecturers, researchers, and administrative staff. The tenure of these community members in DIPLC facilitator positions varied widely, from less than a year to over a decade. Participant selection was conducted through convenience sampling (Etikan et al.,2016).

## Research Tools and Procedure

The data collection process was conducted in two phases, using two research tools. In the first phase, 32 DIGIT participants responded to an online questionnaire. In the second phase, semi-structured, in-depth interviews were conducted with four moderators and six members of DIGIT. The questionnaire aimed to capture broad perceptions of the community's role and impact, while interviews provided deeper insights into individual experiences and perspectives. Ethical standards, including informed consent and anonymity, were rigorously maintained throughout the study.

## Data Analysis

Thematic Analysis was employed to analyze the data, involving organizing data into categories, mapping analysis, centralized cross-sectional analysis, and comparative analysis between community leaders and members. This structured approach, reviewed by two experienced researchers, ensured a comprehensive and credible analysis (Braun & Clarke, 2006; Lincoln & Guba, 1985; Patton, 2015).

# Findings

This study investigates the DIGIT CoP on WhatsApp, seeking to understand how digital platforms shape PD dynamics. Two inquiries are central to the research: WhatsApp features that promote or hinder learning processes and the broader implications of these findings for the PD of educators.

## The characteristics of WhatsApp that support learning in DIGIT CoP

The research question sought to explore the characteristics of WhatsApp that promote learning and PD. The findings accentuate WhatsApp's vital role in fostering learning and engagement within the DIGIT CoP. They identified three principal characteristics of WhatsApp — (1) ubiquity and accessibility; (2) synchronous and asynchronous discussions, and (3) immediate and informal communication—that collectively enhance diverse learning dynamics among members. These features not only support the dissemination of information and ideas but also encourage reflective practice and a sense of belonging, crucial for PD. Table 1 presents examples of participant quotes according to these distinguishing characteristics.

**Table 1.** Examples of participant quotes classified according to identified themes

| WhatsApp Characteristics | Example Quotes |
|---|---|
| Ubiquity and accessibility: Enhancing sharing and engagement | • "[WhatsApp] is a daily tool, available to most of the population. It's intuitive and familiar, requiring no special training or initiation. This keeps the community constantly in the minds of its members, aiding us as community moderators in stimulating engagement." (Michal)<br><br>• "The use of WhatsApp has made it much easier to share ideas and tools within the community." (Ella) |
| Sync and Async Discussions: Enablers of Reflective Learning | • "WhatsApp group discussions serve as a mirror for self-assessment and continuous improvement in my role as a facilitator." (Ella)<br><br>• "The platform facilitates learning and thinking about raised topics, bolstering idea development and thought refinement." (Itai) |
| Immediate and informal communication: Drivers for a sense of belonging | • "The community's vitality and the sense of belonging it offers make me feel secure." (David)<br><br>• "In DIGIT, there's a personal connection I can establish if I choose to. [This way], I have someone to turn to for personal communication, and a group to go to in terms of content." (David)<br><br>•"The genuine advantage lies in its simplicity and accessibility, coupled with an inherent feeling of belonging." (Aviv) |

**The characteristics of WhatsApp that hinder learning in DIGIT CoP**

The research question also sought to explore the characteristics of WhatsApp that hinder learning and PD within the DIGIT Community of Practice (CoP). Our investigation identified five specific characteristics of WhatsApp that detract from the platform's effectiveness for learning and development. These include: (1) the challenges posed by the group's size and the overwhelming influx of messages, impacting the sense of community; (2) the "anonymity paradox," which affects commitment and engagement; (3) the sense of isolation felt by newcomers; (4) the barriers to clarity and connection presented by reliance on written communication; and (5) the platform's limitations in effectively preserving and organizing shared knowledge and resources, complicating the retention of valuable information for both current and future members. Each of these factors plays a distinct role in the dynamics within the DIGIT CoP, influencing members' capacity to engage, share, and learn efficiently. Table 2 presents examples of participant quotes according to these distinguishing characteristics.

**Table 2.** Examples of participant quotes classified according to identified themes

| WhatsApp Characteristics | Example Quotes |
|---|---|
| Group size, the influx of messages and fragmented discussions: Impact on the sense of community | • "I am drowning in WhatsApp groups. I can get to the point that I see 178 unread messages in the DIGIT group." (Haim)<br><br>• "It's very difficult to follow a conversation thread. if you start some kind of discussion, but at the same time someone just published something else, it can get 'stuck' in the middle, and won't get noticed." (Sarah)<br><br>• "The disadvantage of WhatsApp is that as it grows, it becomes more niche. For example, if suddenly someone raises something, but it's not relevant to me, then I won't take part." (Rachel)<br><br>• "The WhatsApp group sometimes feels too crowded - the multitude of participants and posts that sometimes come up can be overwhelming." (Dina). |
| Technical Limitations of Knowledge Management | • "WhatsApp fails to preserve discussions or download all content during device switches, making it hard to maintain or access shared knowledge, unlike other platforms." (Michal)<br><br>• "It's tough to keep up with and save the knowledge shared on WhatsApp, making it hard to add important materials to our shared resources." (Yael) |
| The anonymity paradox leads to lack of commitment | • "It is very complicated to raise sensitive topics, even anonymously, and the group lacks sufficient space to delve deep into such dilemmas." (Rachel)<br><br>• "In huge groups with no commitment or intimacy, members who want partnership lose professional intimacy." (Aviv)<br><br>• "Without names, [next to the phone numbers] there is no continuity - discussions cannot be connected to identities, further hindering intimacy." (Tamar) |
| Newcomers' anonymity fosters isolation | • "I looked at the number of participants and realized that I feel like a stranger within DIGIT…Even when I post things, they often go unacknowledged, which affects my willingness to participate further." (David)<br><br>• "I feel like there are cliques and I still can't manage to feel like I belong in the group, only that I'm consuming information." (Itai) |
| Written communication: barriers to clarity and connection | • "WhatsApp is a writing platform. It differs from other media in many ways. We are missing body language… Therefore, the things that are written need to be written very, very, sensitively and cautiously, and with attention to the diverse population we have in this group." (Tamar)<br><br>• "I think that many times when you want to convey something from a message on WhatsApp, it is not perceived as meant. There are always other things that can distort the message. I am often afraid of that." (Liat) |

## Discussion

The examination of WhatsApp within the DIGIT CoP emphasizes the intricate balance between the platform's facilitative features for learning and the inherent challenges that accompany its use. This discussion aims to delve deeper into these dynamics, offering insights into how digital platforms like WhatsApp can be optimized for PD.

The findings highlight WhatsApp's crucial role within the DIGIT CoP by uncovering unique usage patterns that significantly influence member engagement and learning dynamics. The platform's immediacy and informal communication style contribute to strengthening community cohesion and promoting a distinctive mode of member engagement. Notably, members tend to utilize private messaging for sensitive discussions, strengthening feelings of security and support, while also showcasing WhatsApp's dual function in facilitating both public and private interactions (Cansoy, 2017; Blonder & Waldman, 2019). Additionally, the user-friendly interface and real-time nature of WhatsApp, as outlined by Nasution & Munandar (2023) and Cronjé & van Zyl (2022), support continuous and dynamic interactions. This environment fosters reflective learning within larger DIGIT groups, thereby introducing a novel dimension to reflective learning facilitation across diverse community settings (Moodley, 2019; Blonder & Waldman, 2019; Scherz et al., 2022).

However, WhatsApp's design also introduces challenges. Its linear and non-segmented conversation structure often dilutes discussion depth, a limitation that becomes more pronounced as the CoP grows, leading to potential member alienation through niche conversations that may not be relevant to all members, echoing concerns raised by previous research on digital communication platforms (Bouhnik & Deshen, 2014; Cronjé & van Zyl, 2021; Nasution & Munandar, 2023). The ease of overlooking messages exacerbates this issue, challenging the maintenance of a cohesive community and highlighting the critical balance required in managing digital community engagement (Dille & Røkenes, 2021). The phenomenon of members muting the group or overlooking large volumes of unread messages further exacerbates the challenge of maintaining a cohesive and engaged community. This behavior underscores a critical aspect of digital communities – the balance between staying informed and managing information overload. When members miss out on key discussions, their sense of belonging and community connection diminishes, a consequence that has significant implications for the sustainability of online CoPs (Dille & Røkenes, 2021). This insight contributes to our understanding of online communities, demonstrating how their expansion can unintentionally result in fragmentation and decreased member involvement (Nasution & Munandar, 2023).

The study elucidates WhatsApp's technical limitations in managing knowledge within large CoPs, specifically its constraints in categorizing or archiving content, which partly derive from the overwhelming message flow and the platform's linear conversation structure (Nasution & Munandar, 2023). This limitation not only complicates the maintenance and access to shared knowledge, but also affects community moderators' work significantly.

This research elucidates the "Anonymity Paradox" within WhatsApp's use in the DIGIT CoP, demonstrating its unique effects in online learning communities. The study delves into how this paradox intricately impacts the cultivation of intimacy and engaging in sensitive discussions. At the heart of the paradox is the tension between the desire for deeper connections, facilitated by recognizing familiar names and faces, and the need for anonymity, particularly when addressing sensitive topics. WhatsApp's reliance on phone number-based identification contradicts this need, creating a significant dilemma. This design choice affects community engagement in two primary ways: it complicates open discussions on sensitive issues, risking members' reputations (Dille & Røkenes, 2021), and diminishes the sense of intimacy and trust crucial for a vibrant learning

community. By examining the "Anonymity Paradox" in this specific educational setting, the research sheds light on its nuanced implications for engagement, trust, and the overall dynamics within digital CoPs.

Additionally, the findings also highlight how WhatsApp's anonymity may inadvertently isolate newcomers, who struggle with feeling like outsiders amid established cliques. The lack of shared context and understanding hinders integration, making entry into a large, active group daunting and leaving new members feeling disconnected. This emphasizes the need for strategies to balance anonymity with fostering a sense of belonging and engagement.

Lastly, the reliance on written communication in WhatsApp as the primary mode of interaction, introduces significant challenges, particularly in educational contexts like DIGIT. This method's inherent limitation is the lack of non-verbal cues, crucial for nuanced communication, requiring users to employ precise language and consider diverse perspectives carefully. Such a demand for accuracy and sensitivity in text-based interaction can lead to a considerable cognitive burden, especially for already overworked educators. This complexity in digital communication, illuminated by Moodley (2019), points to the importance of refined strategies to support effective and empathetic communication within educational settings.

## Implications for Digital CoPs Management

This research, aimed at deeply examining WhatsApp's role in digital CoPs, underscores its pivotal influence in shaping the design and management of these communities. It highlights how WhatsApp facilitates diverse learning experiences and stimulates community engagement, overcoming geographic and temporal barriers. Yet, it also elucidates challenges unique to WhatsApp, such as the "Anonymity Paradox" and knowledge management issues in online CoPs. Addressing these challenges necessitates innovative strategies that balance privacy with meaningful engagement and the use of complementary tools for improved content organization.

The key contribution lies in enriching academic and practical knowledge about WhatsApp's use in managing digital communities, focusing on how its features impact PD. The insights offer practical guidance for leveraging WhatsApp in educational contexts and inform effective management strategies. By providing a nuanced understanding of WhatsApp's impact on PD, this research contributes to the ongoing dialogue in the field.

In terms of its academic contribution, this study enriches the scholarly discourse by shedding light on the complex dynamics within WhatsApp-based CoPs. To further validate the conclusions and enhance generalizability, future research should consider comparative analyses between WhatsApp and other platforms used for managing digital professional communities.

By concentrating on these considerations, educators and policymakers are better positioned to utilize digital tools more effectively, enriching the PD landscape and fortifying online learning communities.

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