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In-betweenness in ICT4D research: critically examining the role of the researcher

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ABSTRACT

The ICT4D discipline has faced criticisms of an uneven production of knowledge that reinforces a dichotomy between Global North-Western knowledge systems on the one side, and Global South-indigenous-Southern knowledge systems on the other. As a result, some ICT4D literature has examined the role of the researcher in reinforcing these biases and further exacerbating inequalities, thus highlighting the complex relationship between ICT4D researchers and the research process. Yet, most of this literature has focused on an insider/outsider researcher positionality. This paper explores the role of the researcher from the alternative position of in-betweenness, where researchers adopt more fluid and dynamic positions as *reflexive spaces*. To do this, we engage in a dialogical process of retrospective reflections based on ICT4D projects in Nigeria, Peru and West Africa. Through these cases, we identify how we experience in-betweenness in distinct ways: as *liminal spaces*, as *performative spaces*, and as spaces of *disjuncture*. We also examine how these forms of in-betweenness informed our research. We demonstrate that a researcher positionality of in-betweenness in ICT4D research can increase awareness of nuanced researcher roles and potentially avoid ethical dilemmas and reproducing biases.

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1. Introduction

The ICT4D discipline is at a crossroads (Walsham, 2020). Scholars have noted how the politics of ICT4D tend to reinforce dichotomous relations, e.g., between donors, practitioners or researchers and beneficiaries or participants (Buskens, 2010; Joia et al., 2012; Schelenz & Pawelec, 2021). This dichotomous tendency can also be identified in the preponderance of theories developed in the Global North (Walsham, 2020), and a lack of engagement with Southern theories to enrich the discipline (Kreps & Bass, 2019).

This leads to a series of issues worth highlighting. There is limited participation of indigenous researchers (Bai, 2018; Joia et al., 2012), and a dominant belief in the superiority of science and technical knowledge subordinating indigenous knowledge and traditional practices (Puri & Sahay, 2007; Ravishankar et al., 2013). Sometimes, there is also a lack of engagement with research participants, overlooking how research could help address their problems (Bai, 2018; Harris, 2015; Joia et al., 2012; Mama, 2007; Qureshi, 2015), amongst other challenges. This has sometimes led to ICT4D projects failing to meet expectations (Díaz Andrade & Urquhart, 2012; Gregor et al., 2014; Qureshi, 2015; Walsham, 2020) and the imposition of ideas that have been developed and shaped in the context of the West (Schelenz & Pawelec, 2021; Soeftestad et al., 2003). Research adopting

a modernisation lens, for instance, focuses on ICT readiness and access, digital divides and how ICTs can contribute to economic growth (De' et al., 2018). Such a view predominantly focuses on the ICT artefact itself rather than the transformative potential of ICT to improve the lives of people (Walsham, 2012; Zheng et al., 2018).

ICT4D research and policymaking reinforces a dichotomy between Western institutions, funders, theories, and Southern participants, contexts, and empirical data. Researchers may favour the dominating existing research paradigms that are profoundly founded in Western-oriented, private-sector focused, modernisation-oriented perspectives backed by interpretive and positivist research methods (Hirschheim & Klein, 2012). Moreover, ICT4D researchers are working in research institutions, usually located in the Global North, focused on high citation counts and publications in top IS journals, goals which might be implicated in extractive practices (Harris, 2015; Joia et al., 2012). This knowledge asymmetry is already evident in the published outputs of the field's key journals and conferences and those of the IS reference discipline, predominantly featuring not only Western scholars but also those native to development contexts who reside in the North (Bai, 2018; Joia et al., 2012; Walsham, 2020).

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Thus, as ICT4D researchers, we are bound by these settings and may accidentally import Western centric agendas to the Global South,¹ which include funding landscapes and knowledge systems (with some exceptions) (Schelenz & Pawelec, 2021). This potential risk is crucial in a field like ICT4D, where many researchers are committed to explore how ICTs can help achieve socio-economic impact and often focus on people's lives and livelihoods (Walsham, 2012). This requires an ethical awareness around the role of technology in potentially amplifying inequalities (Toyama, 2011), a focus on the most vulnerable (Cibangu, 2020) and a consideration of ethical principles (Dearden & Kleine, 2021), amongst other aspects. Crucially, it also involves a consideration of our roles as researchers, in potentially exacerbating the inequalities that our research is aiming to tackle (K. E. M. Krauss, 2021).

Other fields have sought to resolve similar challenges through closely reflecting upon the role of the researcher (Cupples & Kindon, 2003; McNess et al., 2015). The researcher's positionality has been debated in anthropology, sociology, geography and more (Lu & Hodge, 2019; Mullings, 1999). In these fields, scholars suggest that the positionality of the researcher influences both how they engage in fieldwork with participants as well as how they interpret their research findings (Mullings, 1999; Sultana, 2007). Defined as an ongoing practice of evaluating how one's viewpoint, values, and position may influence the research process (Sultana, 2017), literature on reflexivity examines the researcher's involvement in knowledge development, taking into account a variety of factors (Obasi, 2014).

In processes of reflexivity, the "insider/outsider" dichotomy has dominated the literature (Lu & Hodge, 2019), referring to the researcher's membership status in the group or community being researched (Naples, 1996). It is part of a tradition of research exploring how different features of a researcher's identity may enable better access and understanding of a specific community, and how this implicates bias and/or independent thinking. It is often described in terms of identity, social position and belonging, demarcating the boundaries that divide the research participants from the researcher. Insider/outsider is also a categorisation attributed to researchers in development studies, who are often located in the Global North and seek to study Global South contexts (Giwa, 2015).

The insider/outsider dichotomy has been influential in exploring the role of the researcher (Berger, 2015; Lu & Hodge, 2019; Milligan, 2016). This notion, however, has been criticised for offering a fixed binary of insider/outside categories and being insufficient in conceptualising the multi-dimensional interactions experienced by researchers during fieldwork. (Merriam et al., 2001; Milligan, 2016; Obasi, 2014).

Instead, the debate has now moved to a more fluid and dynamic approach through the notion of "in-betweenness", given the recognition that researchers sometimes are neither complete insiders nor complete outsiders. Researchers more likely occupy different spaces depending on the context of a specific research project (Delph-Janiurek, 2001; Kerstetter, 2012). This aspect allows researchers to further explore the researcher's own bias and assumptions, by constantly reflecting on the shifting fluidity of their identities within discourses of global knowledge production (Giwa, 2015).

Previous ICT4D studies that explored the role of the researcher have predominantly explored this from the dominant insider/outsider perspective. Confessional accounts, self-reflexive and potentially transformational ethnographic methods have been employed in both IS and ICT4D research to accomplish just this revelatory process (e.g., Krauss, 2018; Prasopoulou, 2017; Prommegger et al., 2021; Schultze, 2000). In most of these studies, there is a perceived dichotomy of the researcher as an outsider as opposed to the practitioner as an insider (e.g., Schultze, 2000), or the researcher as an outsider to the researched communities (K. E. M. Krauss, 2021). Encounters between researchers and research participants are discussed around power relations where the former holds the power over the latter. This assumption about researcher identity had led to fixed assumptions of the nature of research, exacerbating the dichotomy already mentioned.

However, researchers can learn and be flexible in this. This is particularly the case for researchers who are not on either side of this dualism, but positioned somewhere in-between. While cognate literature in the social sciences is already actively exploring the in-between phenomenon, we find that both the IS and ICT4D literature are only touching upon the topic so far, leaving room for more contributions to this debate. This is crucial in ICT4D, given that some researchers represent a researcher position that is neither purely outside nor inside, but somewhere in-between (Dwyer & Buckle, 2009; Joia et al., 2012). This, as explained earlier, ultimately shapes the research process.

In this paper, we attempt to answer the following research question: How do we as ICT4D researchers experience "in-betweenness" in Global South research contexts and how does this process inform our practice? Our motivation stems from a desire to explore how ICT4D researchers can overcome the aforementioned biases in our field by reflecting on their own participation in the research process. We hope that examining the in-betweenness of many of us will enable a type of dialogical academic engagement to question our contextually embedded assumptions, and to facilitate reflexivity (Hamann et al., 2020).

We structure the paper as follows: Our literature review focuses on the researcher's role and how it is discussed in the literature. This involves an examination around insider/outsider and in-betweenness, a focus on positionality and reflexivity and different conceptualisations of in-betweenness. [Section 3](#) describes the process we used to explore our in-betweenness, which was a retrospective reflexive process of three independent ICT4D studies. [Section 4](#) briefly introduces the research settings and project descriptions. [Section 5](#) examines how three distinct accounts suggest three distinct experiences of in-betweenness and how these shaped aspects of our research. [Section 6](#) concludes with limitations of this paper and future research.

2. Literature review

2.1. *The researcher, the research process and knowledge production*

Scholars have long argued that the researcher's positionality and worldview shape the research process and the knowledge produced from their research (Berger, 2015; Soedirgo & Glas, 2020). Whether it is qualitative, ethnographic accounts (Ann, 2017) or quantitative studies (Adida et al., 2016), the researcher impacts how the field is accessed, how information is obtained and how data are interpreted, amongst other aspects (Berger, 2015). Thus, there needs to be an active acknowledgement that the relationship between the researcher's influence and the production of knowledge is not neutral (Berger, 2015; Soedirgo & Glas, 2020; Stahl, 2014; Sultana, 2007).

Reasons for this are varied, but authors agree that it stems from the positionality of the researcher. Positionality can be defined as the "placement within a set of relations and practices that implicate identification and 'performativity' or action" (Anthias, 2002, p. 501), and refers to a combination of social status groups to which an individual belongs and that individual's personal experience (Bettez, 2015). It is usually assumed that attributes such as race, class or gender are important signifiers for how the research process is experienced, but they are not the only ones, nor do they immediately determine positionality (Soedirgo & Glas, 2020; Sultana, 2017). Other factors like our personal and professional experiences, as well as our political and ideological stances can shape our positionality (Berger, 2015).

Rather than assuming one specific aspect, Berger (2015) explains that a researcher's identity and positionality affect the research in three major ways: how the field is accessed, the researcher-researched relationship and what/how information is shared and how the findings and data are interpreted (Krauss, 2018; Mullings, 1999; Sultana, 2007). In some cases, the concern is around the researcher having more

power than participants, resulting in ethical issues that affect the research process (Mullings, 1999; Mwangi, 2019). But researchers experience positionality in ways that shift within varied social contexts and structures (Anthias, 2002; Bettez, 2015).

Scholars advise researchers to reflect on their function in the field and how they interpret the findings to better understand their contingent role (Soedirgo & Glas, 2020). Reflexivity is an ongoing process of questioning how a researcher's perception, values and position might influence the research process, the interpretation of findings and outcomes (Sultana, 2017). Furthermore, positionality informs reflexivity and vice versa (Sultana, 2007). Chacko (2004) describes how her reflexivity helped her dispel some preconceptions about her research subjects and herself. Sultana (2007) discusses how engaging in reflexivity enabled her to develop a more complex and nuanced understanding of issues raised during fieldwork, thereby shaping the knowledge produced as interpretive, partial, yet critical in telling stories that are frequently hidden due to broader power structures. Thus, in engaging in a process of reflexivity, a researcher can better grasp a range of issues that may influence the field and how it affects knowledge creation (Obasi, 2014).

2.2. *Insider/Outsider dichotomies and "in-betweenness"*

Most debates around the role of the researcher have often been dominated by the researcher's membership status in the group or community being researched (Lu & Hodge, 2019). This is typically expressed in terms of identification, social position, and belonging, defining the boundaries that separate the research participants from the researcher (Naples, 1996).

Thus, a researcher's positionality may either improve access and knowledge of a community or increase rejection and bias. Some of the literature assumes that researchers and participants have fixed power positions due to gender, class, or race hierarchies, leading to entrenched conceptions of the relationship between researchers and research participants. (Mullings, 1999). However, this approach has been criticised for failing to capture the multi-dimensional interactions researchers see in the field (Merriam et al., 2001; Milligan, 2016; Obasi, 2014). Authors' own stories reveal that insider/outsider viewpoints can essentialise their roles, affecting both the research and the knowledge produced (Chacko, 2004; Henry, 2003). This dualism has been challenged by pointing out that researchers' membership roles might be contextual and contingent, and so more fluid than a rigid binary suggests (Greene, 2014; Sultana, 2007). It could also indicate opposing positionalities in which

one appears to define the other. Insiders appear to be necessary to define outsiders, with the grey area in between being little understood.

Authors explain that a permanent insider/outsider divide may ultimately generate biases into research and knowledge formation. For example, Soedirgo and Glas (2020) claim that researchers who understand their positionality in static terms can generalise about its consequences. They explain how their original static positionalities affected successive study iterations. Seeing himself as an outsider, Glas highlights his own struggles in gaining access to potential interviewees and developing genuine relationships with them. Conversely, seeing herself as an insider because to her faith, Soedirgo admits oversights in her data analysis and interpretation.

Alternative conceptualisations focus on the mutual and reinforcing role between researchers and research participants. For instance, Delph-Janiurek (2001) defines it as “[...] the notion that, in addition to research knowledge being a collaborative product, researchers and researched mutually constitute each other through research processes in multiple, shifting ways”. (p. 414). This element allows researchers to analyse their own biases and assumptions while continually reflecting on the fluidity of their identities within global knowledge production discourses (Giwa, 2015, p. 8). In-betweenness implies that we portray ourselves in multiple ways as our identities shift (Srivastava, 2006). Instead, we recognise the dynamism of researcher’s identities (Mullings, 1999). In this sense, while the defining qualities of our positionality may remain constant, their meaning in research may vary (Kerstetter, 2012).

2.3. Insider/Outsider dualisms in IS/ICT4D research

In IS and ICT4D studies, the researcher’s positionality is frequently not openly addressed, but there is often a perceived dichotomy of the researcher as an outsider against the practitioner or research subject as an insider. (e.g., Schultze, 2000). Researcher reflexivity and positionality are advocated for as a way to promote a critical IS agenda, less related to organisational settings and more towards social and ethical issues (De Vaujany et al., 2011). A critical IS agenda foregrounds the researcher’s role more centrally in the entire research process since their role in reproducing biases in knowledge production is more actively acknowledged (Cecez-Kecmanovic, 2011).

The key differentiator that positionality creates in the research process is also openly acknowledged and explored in some critical ICT4D research (Joia et al., 2012; Krauss, 2018; Krauss & Turpin, 2013; Light et al., 2010). Krauss (2018), for example, illustrates how the complex interplay of ethnicity, gender and researcher

identity influenced community entry during the initiation of an ICT4D project in a Zulu community in South Africa.

Researcher membership in different communities and how the researcher identifies with those communities inevitably comes into play when positionality is discussed. Often, though, these debates lead to representations of the outsider/insider dichotomy or some semblance of it along the lines of ethnicity, gender, race, religion, researcher vs. participant identity and other similar characteristics (Joia et al., 2012; Krauss, 2018; Krauss & Turpin, 2013; Thapa & Saebo, 2011). Light et al. (2010), for example, explain how their gender influenced the way they positioned themselves to gather data and choose their participants in their study. They further explain how gender tensions were compounded by the researchers’ own physical and social characteristics, such as race, age, social class, and skin colour (Light et al., 2010). Joia et al. (2012) discuss 4 distinct ICT4D researcher perspectives based on their country of origin and location. These perspectives are presented as dichotomies (e.g., indigenous researcher in a developing country, non-indigenous researcher in a developing country, etc.).

The perspective of a researcher who is not on either side of this dualism, but positioned somewhere in-between is seldom discussed or explored. Krauss (2012b) mentions that his experiences in the field have moved him closer to an insider position from his original outsider identity, but a detailed account and problematisation of this positioning is not explored. Similarly, Warrick et al. (2016) examine the boundary-spanning potentials of those identifying as in-between, who can bridge the insider-outsider gap in HCI research in ICT4D. The mutual constitution of researcher-participant identities is mentioned but not investigated deeply.

2.4. Conceptualising in-betweenness ...

2.4.1. As reflexive spaces

While potentially resolving the insider/outsider dichotomies in ICT4D research discussed in the Introduction, in-betweenness also amplifies grey areas in understanding the role of the researcher. It allows for ambivalence, transitoriness, hybridity and creativity (Giesen, 2017), which inevitably enhances the complexity as to how to conceptualise in-betweenness.

Scholars suggest considering reflexive positional spaces, areas where the situated knowledge of researcher and research participant can collide (Dwyer & Buckle, 2009; Mullings, 1999). Rather than being informed solely by identity-based differences, thinking about our roles from reflexive positional spaces allows to recognise multiple realities and situated knowledge encountered in the research process (Soedirgo & Glas, 2020). Unlike insider or outsider

perspectives, reflexive positional spaces involve self-representation (the researcher) beyond and insider/outsider perspective.

Moreover, rather than assuming that the researcher role would be one of privilege and power imbalances, reflexive spaces would involve actively recognising in what ways and to what extent we can experiment with privilege and what can be done to ensure this does not lead to subordination of local knowledge. Moreover, it also involves acknowledging that it can mean we must act and make use of our privilege when it is the ethical thing to do. In this sense, reflexive spaces represent not simply a process of matching identities between researchers and participants, but also recognising that the “dynamism of individual identities should be taken into account” (Mullings, 1999, p. 341).

Reflexive spaces is also a concept adopted in IS research. Pousti et al. (2020) use reflexive spaces to examine how methodological challenges impact social media research. They draw on Alencar et al. (1984) who conceptualise reflexive spaces as multidimensional, where established beliefs can be questioned and transformed through reflexivity. A reflexive space suggests flexible boundaries that allow for constant movement and reshaping, and reflexivity is what allows for that movement to take place and for boundaries to move.

2.4.2. *Using performativity, liminality and diaspora*

Inspired by poststructuralist perspectives, including critical and feminist theory, postmodernism, postcolonial literature, participatory and action research amongst others (Merriam et al., 2001), we draw on three concepts, viz., performativity, liminality and diaspora to further conceptualise in-betweenness.

Performativity stems from Austin's (1963) work and is further developed by Butler (1990, 2004). The concept explores the way actions “[...] create the very thing they claim to simply exhibit” (Parker et al., 2020, p. 296). For example, certain gender performances promote comprehension of that gender and the gendered subject (Butler, 2004; Parker et al., 2020). Language is implicated in performativity since it affects how people perceive themselves, as well as how they make sense of the world. Our identity is constantly changed through speaking acts and symbolic communication. Thus, we do not express an identity; we become the identity through our acts (Wickert & Schaefer, 2015).

Exploring performative acts can help us to understand the construction of researcher identity in the field (Butler, 1990; Markussen, 2005). In-betweenness, thus can be seen not as a capacity or condition, but as a practice, shaped by language, context and different experiences (Parker et al., 2020). Our role as researchers does not precede but rather informs the research relationship with participants and context. How

researchers perform in the field could give them better access to participants, or make the research process more conducive (cf. Light et al., 2010).

The concept of liminality is proposed as a way of experiencing the ambivalence of situatedness. Thomassen (2018) defines liminality as “the experience of finding oneself at a boundary or in an in-between position, either spatially or temporally” (p. 40). Van Gennep's original work conceptualised liminality as a process of separation, transition, and incorporation (Van Gennep, 1960). Separation was perceived as a departure with the past and could be felt at any scale. Transition was the liminal state of being “betwixt and between”, neither here nor there, moving between two states. Finally, incorporation was when a person is fully reintegrated into their new living situation and a new state of being.

Liminality gives a means to view in-betweenness as a disintegration of insider/outsider positionalities, the researcher's spatial and temporal dislocations, and the potentialities of new forms, emergence, and becoming at boundary positions within insider-outsider shifts. These shifts can also be conceptualised as liminal spaces, where different repertoires of practices that embrace ambivalence and transitoriness are legitimised (McConnell, 2017).

Diasporic communities are those whose roots are geographically distinct from where they live. According to (Brah, 1996), these populations are located in a space where “[...] multiple subject positions are juxtaposed, contested, proclaimed or disavowed” (p. 208). Researchers often inhabit diasporic communities, especially when they originate from the Global South but reside in the Global North (Sharabati-Shahin & Thiruchelvam, 2013). It can induce a sense of constantly moving between worlds and but never belonging to any one, occupying that in-between space of ambiguity, hybridity, and fluidity (Henry, 2003).

Diaspora members can be cosmopolitan elites in both their home and host societies, distancing them from the lives of those they write about and represent (Sabo, 2012). In terms of researcher identity, the diasporic experience creates a state of disjuncture, of perpetual disconnection, but also of powerful symbols and contradictions. For instance, privilege is portrayed as disjuncture, in which ambiguity confers a level of power and privilege that can be sensed as discomfort.

Through the concepts of performativity, liminality and diasporic experience, a researcher's in-betweenness can be viewed as a means of embracing ambiguity and discomfiting contradiction, whilst experiencing transitoriness and the potential to become something else through a continuous process of (re)constructing their identity in the field.

2.5. *Synthesising the review and situating our study*

In this paper, we analyse what in-betweenness means for ICT4D researchers, and how it affects knowledge production. We have argued that there is no one way to examine or feel in-betweenness. Instead, we see in-betweenness as reflexive spaces where researchers (re) enact their identities and feeling of belonging in dynamic, context-dependent ways. Thus, performativity, liminality, and diasporic experience are useful conceptual tools for understanding in-betweenness.

We thus privilege 3 forms of in-betweenness: one relating to how we perform our researcher identity in the field (performativity); one relating to how we move between the boundaries of insider/outsider positions (liminality); one relating to feelings of disjuncture and dissonance from what ought to be familiar (diaspora). These distinctions are, however, artificially constructed since the conceptual differences between these terms is not clearly demarcated in the way we are using them. Instead, we see these as conceptually intertwined and overlapping. Furthermore, we can also align them with key concepts about the researcher that we explored in the literature review. Performativity, for example, mainly relates to identity formation in the field, namely how the researcher perceives their positionality in the field. Liminality to researcher positionality and sense of belonging. The diasporic experience mainly towards the sense of belonging to member communities.

Nevertheless, the way we have interpreted these concepts as overlapping and intertwined forms of in-betweenness is particularly relevant to the kind of in-between researcher we explore in this paper. This kind of researcher originates in the Global South, is further educated in the Global North, then returns to the Global South as a researcher. This kind of researcher is likely to experience multiple shifts in the way they perceive themselves as researchers when moving between the different contexts in which they operate. Their positionality is highly likely to influence the contexts they choose, their enactment of their researcher identity in those contexts and the resulting choices they make in the research process. The next section details the process we undertook to explore our in-betweenness retrospectively.

We argue that in-between researcher's position could help resolve dichotomous thinking and uneven knowledge production in ICT4D research. This is particularly relevant in implementing a more progressive, ethical research agenda in ICT4D. From the literature, it is clear that few ICT4D studies give insights into how researcher positionality and identity affect the research process and new knowledge production. Those that do, fail to explore the more fluid spaces in between insider/outsider dualisms although

they acknowledge that they exist. Just as the dichotomous thinking in Western knowledge is problematic in ICT4D, dichotomous thinking in relation to the researcher may lead to fixed assumptions of the nature of encounters between researchers and research participants, often characterised by unequal power relations. Thus, a researcher may not realise that, by embracing Western theories and ignoring indigenous knowledge, and in enacting in a way that shows their power over participants, they are implicated in reinforcing a binary that continues to exacerbate inequalities.

In-betweenness is a suggested better way of looking at the issue. Yet, the unique perspective, i.e., in-betweenness, and its impact on practice, has not been studied adequately. The review shows that little is known about how in-betweenness is currently understood and conceptualised in ICT4D. Yet, the ICT4D field has some crucial opportunities for bringing to light more insights about in-betweenness. With an increasing number of researchers being potentially in-between (e.g., born in the Global South but working in the Global North), an increasing interest in decentering the Western canon of knowledge (Cibangu, 2020; Joia et al., 2012), and an interest in enlisting ICTs for a better world (Walsham, 2012), we consider ICT4D researchers have a potential to critically engage in exploring in-betweenness.

3. Methodology

We adopt an interpretivist approach to explore how, as ICT4D researchers, we experience in-betweenness. To do this, we engaged in a process of retrospective reflection based on our individual projects. Alvesson and Skoldberg (2017) argue that researchers can be critically reflexive while still making room for traditional interpretive approaches to research and incorporating strong empirical elements. Our methodological response is to draw upon an interpretivist paradigm (Walsham, 2006), whilst creating room for critical reflection. We believe this positions us as interpretivist researchers with critical intent (McGrath, 2005; Walsham, 2005). Our focus was on adopting a reflexive process that allowed us to look back upon our research practice retrospectively and critically assess what we had done.

Given our epistemological orientation, we decided that our methodological approach needed to meet several objectives: (1) to enable us to reflect on our research practice retrospectively, (2) to critically assess our recollections of our practice, (3) to engage in a dialogic method to question each other and reflect on our actions and experiences, (4) to make sense of and extract meaning from this process and (5) to document these outcomes so that others could also make sense of our experiences in our research

practice. Moreover, we were also guided by concepts related to the researcher's positionality, identity and relationship to their participant communities.

We found considerable congruence between these objectives and Fook's (2011) method for group critical reflection. This led us to adopt Fook's (2011) method for group critical reflection. Fook (2011) defines critical reflection as a way of learning from and reworking experience to encourage an "[.] understanding of the way (socially dominant) assumptions may be socially restrictive, and thus enables new, more empowering ideas and practices" (p. 40). Her method is socially interactive and begins with providing examples of participants' own experiences. Through creating a dialogue, participants are invited to ask each other critical questions. Fook suggests this helps participants "[...] reflect further and connect personal experience with social and cultural beliefs and practices" (Fook, 2011, p. 57). Moreover, through this dialogical process, participants can better understand their own actions and thought-processes, making meaning of how they shape their environments. The expected outcome is that participants can thus develop a shift in their thinking, re-constructing aspects of their identity (that of the researcher, in this instance). This relational process facilitates an understanding of their own reflexive space, that is, always in dialogue between the self and the "other" (Bagnoli, 2004).

In selecting project experiences we would share with each other, we chose ICT4D projects we have recently worked on where we either were the principal investigators or had a lead role. Our projects all had some focus on technology and development, and involved some form of fieldwork, where we had access to data in the form of research diaries or interview scripts. This level of familiarity with the projects meant that we were able to share our experiences from a first-person perspective, but focused on specific incidents in our research, rather than critical events and social actors in our lives (Mathias & Smith, 2016).

The vignettes, described in more detail by Jimenez et al. (2021), are the final result of a process that combines Fook's (2011) critical reflection method with an inductive analysis, i.e., the sense-making part of our methodology. Our process was flexible, allowing our discussions to shape the decisions we made and avoiding reproducing dominant criticisms of reflexive processes, namely, navel-gazing and self-indulgence (Sultana, 2007, 2017).

The implementation of the methodology spanned a period of 5 months from January 2020. We held 14 meetings² during the course of these months. We began by writing retrospective remarks on our individual projects in order to create a "raw" depiction of our experiences. To create structure, we set a time constraint of one week and a word limit of 800 words for sharing what we considered relevant from

our study experience. This entailed a process of self-reflection without examining current literature or knowing too much about each other's work, so we could identify crucial reflection topics inductively.

We then exchanged reflections. Similar to Fook (2011), this entailed a group session during which the other two authors read one person's reflection and then repeated what they understood about it, followed by requests for clarification and additional questions.

Following Tshuma and Krauss (2017) assertion that reflexivity in ICT4D entails an examination of the researcher's own assumptions, beliefs, and behaviours, additional questions were utilised to elicit reflection (e.g., What were you assuming when . . . ? How do you think participants perceived you when . . . ? What perspectives are missing?). We wanted to investigate openly the values and assumptions that underpin our stories, as well as what mattered and what we should reflect on more.

This interaction was vital to comprehend the reflection's relevance to each other, as well as our perceived differences and similarities. Inductively, we began to see similarities and differences in our reflections. With this information, we were able to construct an initial set of criteria that we considered shaped the study process. Then we reviewed our reflections based on the criteria we agreed upon, expanding them to include new features. We each had two weeks and a maximum of 1000 words to elaborate on our initial thoughts and address issues raised in the previous round. We decided to include non-previously stated yet resonant experiences or anecdotes from the research period. To provide a more informed reflection, we decided to undertake a reading of literature, to help us expand on some of these instances (K. E. M. Krauss, 2021; Krauss, 2018; Light et al., 2010). For example, we saw that technology played a critical part in all of our encounters but lacked the language to articulate it properly. As a result, we began reading literature on techno-rationality. During this stage, we began to identify how our identities influenced our study. We discussed how certain features facilitated access to participants or hampered our capacity to collect data. We discussed how participants misconstrued our actions and vice versa. Finally, we scheduled more meetings to re-examine each other's ideas in light of the previous discussions. We used inductive analysis to make sense of our experiences as reflexive spaces and define their properties. We also asked ourselves what we would do differently after this thought, and we took a closer look at technology's role. We organised our vignettes into two main sections through this process, informed by the literature on the role of the researcher: one focused on **positionality**, which was related to aspects of our identities that influenced the research process, either in relation to

how we were perceived or how we perceived others. Our privilege levels in relation to research participants and the research atmosphere were also discussed. In several cases, our disciplines and others' disciplines influenced how we regarded the study process, ourselves, and others. The second section is a reflection on the **relationship with the participants**. This entailed difficulties in negotiating access to participants. It also entailed considering how far our efforts inadvertently propagated a logic in which ICTs were supposed to address problems, and how this influenced how we navigated the area.

The final stage of this process involved an interpretive analysis to reveal the forms of in-betweenness we were experiencing. We took note of three distinct ways of experiencing in-betweenness and consulted literature that helped us better understand these (Kerstetter, 2012; Schultze, 2000). We theorised the researcher's involvement in ICT4D research and the amount to which this was self-transforming or revelatory. The diverse blend of concepts presented in Section 2.4.2 helped us conceptualise the researcher's "in-betweenness".

The process described above allowed us to reflect and engage in dialogue to uncover layers of our identities as researchers (Bagnoli, 2004), being neither fully insiders nor outsiders in our respective ICT4D projects. In our research projects, we construct our identities in a relational way – between us and the participants, us, coming from a Global North context and the participants operating in a Global South context. In this sense, these "boundaries" between self and other are not fixed, but malleable. Thus an inductive analytical process was appropriate, interspersing instances of self-reflection and dialogue, as many times as necessary for clarifying and identifying our experience of in-betweenness. In summary, our reflexive approach allowed us to communicate our experienced researcher identities and positionalities in respect to one another's perceived experiences. This allows us to interpret our experiences on multiple levels (Bagnoli, 2004).

4. Research settings

For access to our full version of the vignettes, see (Jimenez et al. 2021). The reflexive vignettes relate to research conducted within three projects located in the Global South by the three researchers who are based in a Western university. We provide a summary of the projects below.

4.1. Project 1: field work in Nigeria by Dasuki

This project focused on understanding the use of the mobile phone by internally displaced people (IDP) to improve social inclusion. Dasuki, who was born and

grew up in Nigeria, has been conducting research on the contribution of digital technologies to human development. In this project, the author in 2019 conducted interviews with IDPs who had been displaced by the Boko Haram insurgency in Nigeria. Drawing on the Capability Approach to human development, the author focused on understanding how IDPs use mobile phones to enhance their participation in social, economic, and political activities during (re) settlement.

4.2. Project 2: conducting research on a Pan-African project by Abbott

This research project focused on improving the information capabilities of African librarians especially in relation to the development of open access platforms. Abbott who was born in a British dependent territory and grew up in a former British colony, in the Caribbean, conducted surveys and focus groups with higher learning institution (HLI) librarians in Africa. These research activities were related to a large-scale pan-African awareness-raising and capacity-building initiative that took place in 3 African regions: West and Central (Ghana), East and Southern (Zanzibar) and Northern (Tunisia). The project stemmed from previous advocacy activities taking place in West Africa and led by a West African NGO partner specialising in research infrastructure, connectivity and networked application services among HLIs in that region.

4.3. Project 3: fieldwork in Peru by Jimenez

The research project focuses on the impact of innovation in socioeconomic development from a decolonial perspective. Jimenez, who was born and grew up in Peru, has been conducting research on indigenous knowledge through the notion of Buen Vivir (Merino, 2016), to explore to what extent innovation discourse, policy and practice can be informed by values of collectivity and sustainability. Drawing on a participatory research approach, the author in 2018 conducted research focused on two contexts: an indigenous-led innovation initiative in rural Peru, and Peruvian scholars that work in the field of innovation. The author focused on comparing and contrasting the discourses in both contexts to explore complementarities and contradictions.

5. Discussion

5.1. How in-betweenness is experienced in research

The process of self-reflection resulted in different experiences of being in-between. The three authors of this paper inhabit a form of positionality/researcher

identity that although not unique, is distinctive: we have been born and raised mostly in the Global South, yet we are now located in Western institutions. The literature would suggest that these characteristics place us within an insider/outsider dualism (Milligan, 2016). However, being in-between was neither an attribute or a static quality of us as researchers (Giwa, 2015). In reality, any researcher who switches between dialectical perspectives (insider-outsider, participant-observer, subject-object) during a research process could be considered in-between (Chawla-Duggan, 2007; Giwa, 2015). It is not the place where we were born that figures heavily in this reflexive process but the positionalities that we inhabit based on any number of personal characteristics and the subjective experiences of the process of doing research in a particular context. As mentioned in the literature review, layers of researcher identity revealed in-betweenness can be experienced as reflexive spaces. Rather than having a pre-fixed idea of how we experience in-betweenness, our reflexive process let us understand the fluidity of our experiences as spaces in which we move (cf. Mullings, 1999), incorporating the “dynamism of individual identities” (Mullings, 1999). These we have interpreted as reflexive spaces, but manifesting the other dimensions of in-betweenness discussed in the literature review: performativity, liminality and diaspora. Despite the commonalities in our three reflections, we have found three prominent reflexive spaces: performative, liminal, and disjunctive. In the following, we distinguish between them analytically, but admit significant conceptual commonalities.

5.1.1. *In-betweenness as performative spaces*

For Dasuki, for example, in-betweenness was evident in the researcher’s role as a Nigerian, native to the research context and of similar religious and ethnic background to the research subjects, but also foreign and Western in dress, attitude and purpose for being there (Vignette 1, Jimenez et al. 2021). To gain the trust of the research subjects, he had to renegotiate his potentially foreign “outsider” positionality, by downplaying and emphasising different aspects of himself (Mwangi, 2019). He used methods he had learned as a child to mix comfortably with relatives from lesser backgrounds. Furthermore, his position as a male in Western clothing amid devout Muslim women in an IDP camp drew attention to his in-betweenness in terms of his moral, ethnic, and ethical considerations. He had to “blend in” rather than adopt a Western method to assert an “insider” positionality. He did this by downplaying his Western traits and highlighting his similarities to his subjects, e.g., religion, ethnicity, and origin. Thus Dasuki used his in-betweenness in the research process to perform a more convincing insider identity and adjust his positionality by using

notions familiar to him from his youth, thus performing in different ways to adjust to what might provide him better access to participants.

In this sense, in-betweenness for Dasuki involves learning how to operate in different contexts by inhabiting different aspects of himself that make him more similar to the insider (Anthias, 2002; Bettez, 2015). He adopts different ways of doing this, by incorporating difference and similarity altogether (Chavan & Ajmera, 2007). In this way, in-betweenness represents a performative space, where he can have several options to embody and thus increase his closeness to participants.

5.1.2. *In-betweenness as liminal spaces*

Abbott reflected on the multiple ways in which her researcher identity felt fractured, never fully in one camp or the other (Vignette 2, Jimenez et al. 2021). Abbott experienced her in-betweenness in terms of shifting between liminal spaces (McConnell, 2017) peripherally legitimate but never fully so. For example, in terms of her disciplinary area of information systems, she was not considered to have the skills to take on more technical aspects of these projects, and was relegated to more “qualitative” researcher roles. However, it was this same disciplinary focus that made her feel unsure of orienting herself to a more “qualitative” library/information management approach to the project and led to imposter syndrome issues. Abbott was the research lead by virtue of her privileged association with a Library and Information Studies department within a prestigious university, but not privileged enough to compete on an equal footing with the “big actors” in the research landscape.

She constantly experienced the state of being in-between, but never transitioning to another researcher identity, continually undergoing a liminal experience (Thomassen, 2018). Thus, she was somewhere between an information systems and a library and information management researcher. She was somewhere between leading the research project and agenda, and having little visibility in the relevant research landscape outside of the project. Abbott tried to resolve her unsettling experience by drawing on participatory approaches, incorporating the research subjects into the research design and utilising research assistants from the partner West African organisation’s networks, so she wasn’t mistaken for the Northern “guru”. In this sense, her in-betweenness as a liminal experience was both able to lead to more inclusive and participatory methods, but it was also unsettling. Liminality is meant to encompass transitions, but can also suggest never moving fully from one state to another (Horváth et al., 2018; Thomassen, 2018), as was the case in Abbott’s reflection.

5.1.3. *In-betweenness as spaces of disjuncture*

Jimenez's experience of in-betweenness made her reflect on her intersectionality and identity not just as a researcher but also as a Peruvian (Vignette 3, Jimenez et al. 2021). In-betweenness was experienced as a confrontation between privilege and multiple epistemic viewpoints, challenging her identity and beliefs. This produced a dilemma between being young, female, and educated in the Western culture, while also being aware that this tradition was a symbol of oppression. She was uncomfortable with the symbols she embodied: a strong, emancipated female academic with an ethical value system.

In her approach to this conflict, Jimenez adapted ethnographic methods that were more sympathetic to her research subjects' ways of being, doing and knowing so as to counteract the Western hegemonic influences that she felt overshadowed her role. For example, she allowed the indigenous community to take her privileged place at a conference to resolve the conflicts and dilemmas that the research situation was presenting. Her experience of in-betweenness mirrors the disjuncture of a diasporic community that is always apparent; the disjuncture of always being disconnected (Brah, 1996; Henry, 2003), but representative of powerful symbols and contradictions (Sabo, 2012).

These three distinct experiences of in-betweenness are dynamic; they cross-temporal and spatial boundaries, and continually reconstitute the researcher's identity. Framing them in these ways is helpful in understanding aspects that may be dominant in our research process, so that we can either be mindful in future research and actively adjust our practices or be aware of how we are self-identifying (or not) within the research context.

5.2. *How can in-betweenness influence our research practice*

The literature suggests that dichotomous thinking of insider/outsider dualisms would tend to pigeon-hole us as researchers into fixed ways of thinking, such that our enactment of dichotomies may not be evident to us (Soedirgo & Glas, 2020). However, surfacing the reflexive spaces of our in-betweenness gave us insight into how we unintentionally re-enacted some of the dichotomous biases in ICT4D research and how that affected the research.

For instance, Dasuki comes to realise that he is unwittingly re-enacting extractive research practices, which though not of his own making, now constitute the IDP's experience of Western research (Vignette 1, Jimenez et al. 2021). Dasuki was re-enacting the positionality of the Western outsider, who through privilege and power could secure access to this vulnerable population for constructing knowledge claims of value

to academic audiences in the West (Mwangi, 2019; Tshuma & Krauss, 2017). Through retrospection, the tensions that arose with the research subjects were a significant learning experience for Dasuki.

In liminality literature, incorporation is the final stage the subject arrives to that involves a resolution and change of identity (Beech, 2011). This was not the case for Abbott, who is aware of how enacting a role as a North-based researcher, with the relative privilege and prestige that entails. As a liminal subject, she occupied an ambiguous and uncertain position in the project (Czarniawska & Mazza, 2003) with multiple meanings attached to her (a non-White, relatively non-influential, North-based researcher). These factors contributed to her inability to assert her own views on the direction of the project (Sturdy et al., 2006), inevitably shaping the project. These findings further complements Krauss (2018) arguments by showing that the complex identity of the ICT4D researcher is relational as well as informed by the different positions we occupy.

Where positionality rendered Jimenez practically voiceless amongst the Peruvian academics, she found it necessary to enact the role of an authoritative North-based researcher to be taken seriously (Vignette 3, Jimenez et al. 2021). She emphasised her role as a Western researcher while downplaying the ways in which her critical thinking would question the Western canon, producing a critical awareness of the disjuncture between her and her study subjects (Mwangi, 2019).

In summary, in becoming aware of our in-betweenness, we discovered how we inadvertently perform in ways that we seek to avoid. We enacted some of the dichotomies when we performed as Western researchers for access to communities, when we brought assumptions about technology as the solution, and when we navigated power imbalances with other project partners without expressing our concerns.

(1) *Contributions to theory and practice: what reflexive spaces tell us about the practice of our research as ICT4D researchers*

Despite this recognition, reflecting on our in-betweenness also allowed us to see how we are able to adopt methods and ways of interaction that are more in-between, resulting in opportunities and challenges in the research process. It makes us aware of our role in disrupting the research process, whether to get access to participants, interpret the data, or choose different methods. As the literature suggests, all of these different aspects inevitably shape the knowledge produced from our research (Krauss, 2012a; Sultana, 2007).

Moreover, in becoming aware of our in-betweenness, we have also learned that these conditions are not static, nor should they be. As the notion

of reflexive spaces suggests, we have learned that we have the agency to move from a dichotomous way of thinking to a more fluid and reflexive space. This involves becoming aware of the structures in which researchers operate, and the power dynamics involved (Krauss, 2018). Theoretically, we make our contribution by identifying specific kinds of reflexive spaces for in-between ICT4D researchers and practically, we demonstrate what this looks like in the field. In our particular in-betweenness experience, these contributions can be explained as follows:

Performative spaces (in theory) – As a way of understanding how researchers form and reform their identity in the field and how they ‘become’ through their interactions with the researched community. Performativity is about enacting researcher identity, about the ‘doing’ of in-betweenness. Thus, performative spaces help in becoming aware of the acting out of dichotomies due to the acute awareness of our positionalities as neither outside nor inside of membership of the participant community.

Performative spaces (in practice) – This is approached by sharing ways in which researcher and researched share similar struggles, showing ways in which the researcher belongs to the community and reducing ways in which they do not. It allows for adopting a flexible approach, adopting different methods for ensuring participants are comfortable with the researcher. This also involves challenging mainstream assumptions around technology, given a closer understanding of local practices that go beyond techno-optimistic assumptions.

Liminal spaces (in theory) – being in a state of transition, recognising the potential to become a legitimate actor but never quite getting there makes us more aware of the structural inequalities in which our research practice sits. Liminality allows us to see how the researcher experiences their role through an understanding of how our spatio-temporal boundaries shift. Breaking down of boundaries through fluid movement between different member communities can be conceptualised through liminality. Thus, liminality is about the experience of in-betweenness, i.e. ‘being’ in-between.

Liminal spaces (in practice) – Moreover, this leads to seeking legitimacy amongst local partners and participants, adopting participatory methods to ensure that legitimacy is inclusive of them, seeking consensus and prioritising their values and needs. However, it also involves feelings of undervalue and inadequacy, leading to imposter syndrome. As a result, although the researcher is participatory and inclusive, they may have difficulty in challenging those who adopt Western-centred values in the project.

Spaces of disjuncture (in theory) – being uneasy, uncomfortable with our experience, proximate but distant to what we knew all our lives allows us to see the things that would be unfamiliar to the participants in this context. The diasporic experience allows us an insight into how it ‘feels’ to be in-between. The diasporic experience conceptualises how a researcher

responds to the transitoriness of liminal experiences and the becoming of a researcher identity in the field. These intertwined concepts thus allow us to understand the doing, being and feeling of in-betweenness of the researcher.

Spaces of disjuncture (in practice) – This leads to more participatory approaches, seeking ways for participants’ voice to be heard rather than the researcher’s. It also involves a constant feeling of discomfort around power and privilege, leading to constant self-reflection and second-guessing. As a result, the research process may be slowed, causing difficulties of accountability and project impact. Therefore, although great potential for overcoming the dichotomies found in ICT4D (by challenging Western epistemic assumptions), it may lead to navel-gazing and self-indulgence (Sultana, 2017).

These insights inform different ways of engaging with participant communities, seeking to avoid the outsider/insider dichotomy, and acknowledging in-betweenness. Participants value the researcher’s positionality differently and this affects access to them in different ways (Kerstetter, 2012). An in-between researcher will need to be aware of the ways in which participants perceive them, and pay close attention to how their worldview does or does not align with participants (Krauss, 2018). Participants will value researchers who understand their worldviews, and researchers also value participant’s input to remain relevant and representative. This complements existing literature on the role of the ICT4D researcher (e.g., Joia et al., 2012; Krauss, 2018; Krauss & Turpin, 2013; Light et al., 2010), since it provides an avenue to move beyond dominant insider/outsider dualisms. A deeper knowledge of how in-betweens present more pliable and dynamic kinds of positionalities is added to this literature, which opens the door to a critical questioning of potential biases that we may be unwittingly perpetuating. The importance of this strategy for the ICT4D community is predicated on the preceding comments about progressive goals, ethical research, inclusivity, and decolonising ICT4D research.

It also brings different perspectives around participatory methods and equitable partnerships, which, although well-meaning approaches on paper, continue to reinforce and reproduce the existing inequalities (Grieve & Mitchell, 2020). Finally, it provides us with better ways to identify with the research participants and reduce inequalities brought about by positionalities imposed by structural inequalities.

6. Conclusion

Existing literature describes ways in which an insider or an outsider position affects the production of knowledge (Joia et al., 2012; Soedirgo & Glas, 2020).

Less explored is how researchers embodying both aspects of inside and outside simultaneously affect the research.

Through our field experiences in three different contexts in the Global South, we sought to explore “How do we as ICT4D researchers experience ‘in-betweenness’ in the Global South research contexts and how does this process inform our practice?” Rather than the dominant insider/outsider dichotomy, which assumes that a researcher’s identity may enable access to a community (or prevent it), or it suggests unequal power relations over research participants, we have found that we experience much more fluid and dynamic positionalities, which are characterised by tensions, conflicts, as well as opportunities. Through this process we have found that in-betweenness can be experienced as reflexive spaces, namely as spaces that are not fixed but dynamic; hence allowing us to embrace the various aspects of ourselves that can help us adapt and avoid enacting biases.

With three diverse forms of in-betweenness because of our in-depth reflections, this paper offers an original way to engage with the role of the researcher and examine our positionality. Our key takeaways are as follows: 1) Let us continue to consider the biases prevalent in our field and the ways in which we may unintentionally reproduce them; 2) Let us acknowledge the fluid and malleable nature of some researchers’ identities and consider how in-betweenness can help us better understand our positionalities; and 3) Let us continue to consider ways in which we, as ICT4D researchers, can make our actions and methods more contextually relevant.

While this study may stimulate open conversations about the importance of the role of the researcher in addressing dichotomous biases in ICT4D research, there are still areas that need to be examined in future research. The study is limited to the particular context of the authors. One of the future steps is to explore how ICT4D researchers in different contexts experience in-betweenness. It is agreed that the positionality of a researcher may differ in its meaning and impact on the research process and outcome in a different context. Hence, exploring how researchers within diverse contexts in different positions experience in-betweenness during the collection and interpretation of data has the potential to help deepen our understanding of the multidimensionality and complexity of the process of reflexivity in qualitative IS research (Berger, 2015). Additionally, the question is whether our proposed framework can be applied by quantitative IS researchers? For example, do quantitative ICT4D researchers experience in-betweenness and does the process of reflexivity impact on the research process and outcome of quantitative studies? These are questions that

require further investigation in order to enhance our understanding of the nuanced facets and complexity of reflexivity in IS research.

Finally, recent discussions suggests engaging with critical approaches that stimulate political reflexivity (Abdelnour & Abu Moghli, 2021). In order to subvert marginalising structures, Abdelnour and Abu Moghli (2021) argue that we need to move beyond methodological reflexivity, by accounting for positionality and privilege in connection to power imbalances in our research. This, we believe, opens up an essential route for future research.

Notes

1. In this article we will adopt Pansera’s (2018) definition of the Global South: “The term ‘Global South’ indicates what used to be called the ‘Third World’ (i.e., Africa, Latin America, and the developing countries in Asia), ‘developing countries,’ ‘less developed countries,’ or ‘less developed regions.’ More than an economic classification, the term Global South refers to a specific geo-political order, an arrangement of power relationships that dominate the relations between the former dominant colonial empires and the dominated colonies.”
2. These meetings moved online once the UK lockdown started (March 2020)

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