"Yes I Am Reflecting on Reflecting!" – Mapping Understandings, Practices, and Challenges in HCI Research Practices

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Abstract

Reflection has long been discussed as a critical component of rigorous and ethical research in Human-Computer Interaction (HCI). However, despite its sustained prominence in methodological discourse, little is known about how HCI researchers understand and practise reflection. To address this gap, we conducted a survey with 85 researchers across diverse HCI subfields, inviting them to reflect on their reflective practices. We identified a diversity of meanings attributed to reflection, the contexts in which researchers engage in it, and the institutional, disciplinary, and personal factors that shape these practices. Participants reported different practices, including team discussions, peer feedback and informal reflection, yet also many barriers to consistency, such as time constraints, lack of institutional recognition, and emotional or cognitive overload. Our analysis surfaces tensions between aspirations for meaningful reflection and dominant norms of productivity, objectivity, and publishability. Our paper offers a meta-scientific mapping of reflection in HCI, along with constructive ambitions to foster a more reflective research culture.

CCS Concepts

• **Human-centered computing → Human computer interaction (HCI)**; **HCI theory, concepts and models**.

Keywords

HCI, meta-HCI, methods, research practices, reflection, self-reflection

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1 Introduction

Reflection has become increasingly prominent in discussions of responsible and rigorous Human–Computer Interaction (HCI) research [5, 9, 54, 63], and this prominence is recent as much as historical: the concept has been revisited and reframed in the past few years [8, 66], and reflexive disclosure in CHI publications has risen sharply since 2022 [55]. Across methodological guidelines, ethics frameworks, and critical research traditions, researchers are encouraged to consider their positionality, assumptions, values, and the broader consequences of their work. Reflection, as a component of reflexivity [30], is often invoked as a way to strengthen ethical accountability, improve methodological transparency, and make visible the normative orientations embedded in research and design decisions [23, 57].

Within HCI, reflection has been discussed in a range of traditions, including feminist HCI [3], participatory design [10, 47], autobiographical design [26], and other first-person approaches [36]. In these areas, reflection is used to examine positionality, subjectivity, care, and power, and to consider how researchers' assumptions and values shape their work. Interest in reflection has also appeared within quantitative and mixed-methods research [16, 61], where it is discussed in relation to data practices, analysis, and interpretation.

Reflection has also played a role in broader conversations about HCI's intellectual development, from early discussions of design practice and professional judgement [52] to later engagements with ethics, values, and responsibility [13, 53]. As the field has expanded to address questions of meaning, context, and societal implications [9], (critical) reflection has been presented as one possible way of examining underlying assumptions in research and design. This position is argued explicitly in reflective design, which treats the surfacing of unconscious values and assumptions as a design commitment rather than a by-product [53]; in arguments for the epistemic value of making the messiness of the research process visible [13]; in feminist HCI's treatment of self-disclosure and reflexivity as design qualities [3]; and in frameworks that specify the levels at which such examination can operate [31].

Despite this attention, reflection is described in varied ways across the field [5, 8], and little empirical evidence exists about how it is understood or practised across the diverse HCI community [6]. Orienting ourselves towards lived experiences of reflection in HCI research practice rather than theoretical possibilities for it, we constructed our research inquiry with the goal of surfacing operational understandings and use of reflection in its variety of forms. Guided by this motivation, we looked into the following three research questions:

- **RQ1** How do HCI researchers understand the concept of reflection in relation to their research processes, design work, or methodological decisions?
- **RQ2** How is reflection enacted and valued across practices, stages, and methodological approaches in HCI research?
- **RQ3** What enablers, motivators, and challenges influence reflection in HCI research?

To investigate these questions, we conducted an online survey with HCI researchers and analysed responses of 85 participants.



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In our sample, reflection was widely reported, but unevenly understood, recognised, and supported. Participants described reflection as ranging from intuitive, ongoing sense-making to deliberate methodological, ethical, and political work. Reflection was most commonly reported through informal self-reflection, team discussions, and peer feedback, and most often during interpretation, planning, and writing. Participants also identified substantial barriers, including lack of time, publication pressure, emotional overload, and uncertainty about how reflection is valued across methodological traditions. Based on these findings, we contribute: (1) an empirical account of how surveyed HCI researchers define reflection, (2) an analysis of how participants report enacting and valuing reflection across research stages and methods, and (3) constructive recommendations for supporting reflective research cultures in HCI.

2 Related Work

Our work sits at the intersection of several literatures: reflection in HCI research and practice, theoretical foundations of reflection, empirical studies of researcher practices, reflexivity in qualitative and collaborative research, and meta-research on research practices. We organise our review accordingly.

2.1 Reflection in HCI research and practice

The HCI community has long recognised the importance of reflection, both as a design goal for users and as a practice for researchers. Foundational work by Baumer et al. [6] examines how reflection is used in interactive system design, highlighting its role in design practice, building on Sengers et al.'s reflective design approach [53]. We return to the theoretical lineage behind these contributions in Section 2.2. In 2010, Fleck and Fitzpatrick [31] synthesised prior literature into a framework that articulates multiple dimensions of reflection, including distinct levels of reflection. They further demonstrated how these dimensions can be supported through technology. Other design-focused literature explores how to build systems that support user reflection, from conceptual dimensions of reflective informatics [5] to methodological tools like duoethnography for collaborative reflection [32]. Pedagogical work investigates how to teach reflection in HCI education contexts, demonstrating the utility of video-based reflection exercises and multi-faceted prompts [50], as well as a workshop toolkit that uses speculative and service design methods to spark ethical reflection in technology development [34]. Additionally, empirical work on HCI practitioners shows how reflective practice informs problem framing in professional settings [45].

2.2 Theoretical and conceptual foundations of reflection

Reflection has been theorised across education, professional learning, and design, and no review can be exhaustive. We concentrate on the traditions that HCI has drawn on most directly when importing the concept, and on the models that specify what reflection consists of rather than only asserting its value. Theoretical foundations draw from Dewey's notion of reflective practice in professional contexts, emphasising active engagement with experience [27, 28]. Schön's distinction between reflection-in-action (thinking while doing) and reflection-on-action (thinking after doing) remains influential [52]. Adjacent traditions in experiential and professional learning specify reflection at a finer grain than HCI typically adopts: Kolb positions reflective observation as one stage in a cycle running from concrete experience to active experimentation [38]; Boud, Keogh and Walker model reflection as a process of returning to experience, attending to the feelings it produced, and re-evaluating it [15]; and Boyd and Fales characterise reflective learning as the internal examination of an issue of concern that changes the learner's conceptual perspective [17]. These models matter for our purposes because they distinguish reflection from mere retrospection – a distinction our participants make unevenly. Bateson's *Metalogue* concept provides a framework for systematic meta-cognitive reflection through dialogue [4]. Conceptual models of reflection have been organised by disciplinary and epistemological perspectives, demonstrating how reflection varies across fields [5]. Zhu et al.'s recent work on diversifying the design of interactive systems for reflection through the lens of Daoism [66] further challenges taken-for-granted Western conceptual frameworks of reflection within HCI. These foundations provide the theoretical grounding for understanding reflection as a meta-cognitive process integral to professional practice.

2.3 Empirical studies of researcher practices

A small number of surveys have examined reflection empirically, but none takes HCI research practice as its object. Mols et al. [40] surveyed reflection in *everyday life*, highlighting the importance of social context, with a majority of participants reflecting both alone and with reflection partners. Tyler et al. [59] surveyed self-reflective practices in the UK *general population*, finding gender differences in technology use for reflection and preferences for analogue over digital tools. Closest to our setting, Chakravorti et al. [24] interviewed early-career HCI researchers – but about *open science conduct*, revealing barriers such as lack of incentives and cultural resistance, rather than about reflection. The first two study populations that are not researchers; the third studies researchers about a different practice. The question of how HCI researchers reflect on their own research remains empirically open. Positionality studies in HCI have examined how researchers' backgrounds shape their work, with systematic reviews highlighting the importance of reflexivity [55]. Additionally, work on research ethics and reproducibility has grown, with scoping reviews documenting current practices and challenges [41].

2.4 Reflexivity in qualitative and collaborative research

Qualitative research traditions have long emphasised researcher reflexivity as a core analytic resource. Reflexive Thematic Analysis (RTA) treats researcher subjectivity not as bias to be minimised but as central to interpretation [20]. Methodological tools supporting reflexivity include duoethnography, which treats the personal as a valuable site of knowledge [51], and analytical provenance tracking, which documents how analytical concepts evolve in team settings [42, 48]. The Reflexis workspace exemplifies design for deliberation, integrating in-situ reflection prompts to support reflexive analysis during coding [64]. These approaches highlight the

importance of making researcher perspectives explicit and traceable throughout the research process.

2.5 Meta-Research and research on research practices

Meta-research has become a recognised contribution type in HCI, with systematic surveys, taxonomies, and literature reviews consolidating fragmented research areas [56, 62]. Studies have examined various aspects of HCI research practices, including the prevalence of WEIRD (Western, Educated, Industrialised, Rich, Democratic) participant samples [39], research ethics compliance [41], positionality reporting [55], citation practices [43], the use of large language models (LLM) [44], and ethical issues related to LLM usage [37]. This meta-research perspective underscores the value of studying research practices themselves to improve the rigour, transparency, and responsibility of the field.

2.6 Synthesis and gap analysis

Taken together, this literature establishes that reflection matters in HCI, supplies theory for what it is, and offers tools for supporting it in users, students, and practitioners. What it does not supply is an account of the researchers themselves. The distinction is easily blurred, so we state it directly: the empirical surveys closest to our concern (2.3) examine reflection in the general population, or open-science conduct among early-career researchers, and not reflection as it is understood and enacted within HCI research practice; the meta-research literature examines what HCI *publishes* – sample composition, ethics reporting, positionality disclosure, citation behaviour – rather than how HCI researchers *work*. Two decades of programmatic argument for reflection have therefore proceeded without a description of the practice being argued for, at the level of the people expected to enact it.

This is the gap our study addresses. Our central question is what reflection actually is as a lived research practice in HCI: how researchers understand the term (RQ1), what they do under it and where that sits in their work (RQ2), and what conditions make it possible or foreclose it (RQ3). Answering this empirically matters because the field's prescriptions currently rest on assumptions about researcher practice that have not been tested – and, as our findings show, several of those assumptions do not hold. We contribute an empirical characterisation of reflection as a reported research practice among 85 HCI researchers and a set of recommendations targeted at the specific conditions our data identifies as constraining it.

3 Methods

3.1 Overall survey design

We conducted the survey using an online questionnaire implemented in Qualtrics and analysed responses of 85 participants. Questions include Likert-type scales, multiple-choice checkboxes, and open-ended (free-text) responses. While our instrument included quantitative measurements, a particularly strong emphasis for us lay on the open-ended topic-based questions to capture a diversity of perspectives on reflection in HCI research practices [21]. The design of our survey drew on insights from pilot testing with six HCI researchers, as well as the literature on reflection, reflexivity, and meta-research in HCI reviewed in our Related Work section. After the pilot, we adjusted the phrasing of several questions and added and modified answer options. The six responses of the pilot study are not included in our analysis. The instrument comprises up to 29 items (some optional or conditional), and was designed to take approximately 20–30 minutes to complete, with optional items included for sensitive demographic questions and supplementary open-ended reflections to reduce respondent burden (see supplementary material). The participants did not receive any financial compensation. Our study received ethics approval from the ethics committee at our research institution.

3.2 Survey questions

The survey includes four main sections: (1) background and methodological orientation (after participants provided informed consent and were briefed about data handling in accordance with GDPR and institutional guidelines), including years of HCI experience, disciplinary background, subfields, publication venues, and optional demographic information to contextualise reflective practices; (2) understanding of the concept of reflection; (3) the reflective practices researchers employ, at which research stages, and their importance; and (4) perceived challenges, and motivations related to reflection. After asking participants to define what reflection is in section 2, we provided a working definition of reflection to establish a shared frame of reference for the more specific questions about their engagement in and attitudes towards reflection:

> *For the rest of this survey, we define reflection as both explicit and tacit processes of reviewing and critically thinking about past and current research experiences, decisions, and assumptions to develop a deeper understanding or gain new insights. This includes considering how your values, context, and perspectives influence your research design, data collection, analysis, and interpretation. Reflection can occur individually or collaboratively, formally or informally, at any stage during, before or after your research. (Adapted from key works on reflective practice and reflexivity [28, 29, 52, 53]).*

Given that our survey relies on participants' self-reported understanding of and engagement with reflection, we additionally included the Self-Reflection and Insight Scale (SRIS) [33] – a validated instrument for measuring individual differences in engagement and need for self-reflection and insight – to capture participants' general reflective disposition, and to explore associations with their reported reflection practices, challenges, enablers, and motivations. The SRIS items were measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), adapted from the original 6-point scale to ensure consistency with the other Likert items in the survey; this adaptation is consistent with prior uses of the SRIS in survey research [49]. Because no specific cut-offs exist for interpreting SRIS scores, we treat them as relative within our sample rather than against absolute thresholds. Additionally, we concluded the survey with two open questions: an optional prompt inviting participants to reflect on whether completing the survey had changed how they think about their own reflective practice, and an optional text field

for further comments. The full survey details are provided in the supplementary material.

3.3 Participants

We recruited participants for the survey through a variety of channels, including advertisements on the social media platform LinkedIn, direct emails to contacts, mailing lists targeting HCI researchers[1], university distribution lists to which we had access, and snowball sampling. To support data quality assessment, the survey included a self-report item in the final questions asking participants whether their responses should be included in the analysis. Of the n=88 participants that fully completed and submitted the survey, 85 indicated that their data should be used, while three indicated that it should not. Based on these responses, we excluded the three participants from our subsequent analyses.

The majority of our participants were affiliated with countries from the global north, including Germany (n=22), Switzerland (n=15), and the United States (n=12). Other participants were affiliated with the United Kingdom, Finland, Ireland, Netherlands, Austria, Denmark, France, Poland, Canada, Cyprus, India, Iran, Italy, Norway, and Spain. Similarly, only 19.8% of participants who reported their country of origin originated from the global south. The gender distribution included 45 women, 34 men, and 4 non-binary individuals, with one participant opting not to respond and another preferring to self-describe.

Among the 85 participants working in the field of HCI, most reported working in academia (74), while the remainder worked in industry (8) or non-profit organisations (3). The median number of years of experience in HCI research among participants was 6 years (M=9.21, SD=9.12). Table 5 in the appendix summarises the participants' demographic data, geographical location, disciplinary background, years of experience in HCI research, their research subfields, and publication venues. The mean total score for the SRIS was 81.4 (SD=9.5, range=55-100), calculated as the sum of 20 items rated on five-point Likert scales (see participants' distribution in Figure 1). Higher scores indicate greater habitual self-reflection and insight; a mean of 81.4, well above the scale's midpoint (60), suggests a relatively high general disposition toward reflection in our sample.

3.4 Analysis

We analysed quantitative data descriptively using Python (Pandas and Matplotlib). In cases where a subset of participants completed questions, we report question-specific response rates. We conducted exploratory data analysis [58], using descriptive statistics and visualisations to characterise distributions, identify outliers, and surface candidate relationships between SRIS scores, HCI experience, and reported reflection practices, challenges, enablers, and motivators, described in more detail in Section 4.3.3. These further analyses were applied selectively to explore emerging patterns rather than systematically across all variables. The exploratory logistic regression models for these cases, including FDR-corrected p-values to account for multiple comparisons, are reported in Appendix C.

[1]Recruitment was conducted via mailing lists including CHI Announcements, regional lists (e.g., Fachbereich Mensch-Computer-Interaktion of the Gesellschaft für Informatik for the German-speaking community), and subfield-specific lists such as UbiComp, and Tangible Interaction.

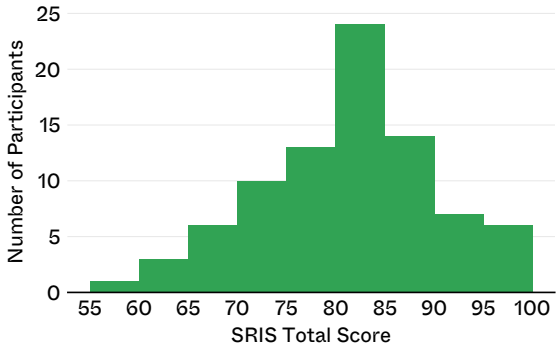


Figure 1: Distribution of total SRIS scores across participants.

For the three open-ended responses (participants' understanding of reflection, reflection on the survey participation, and final comments), we used reflexive thematic analysis (RTA) following Braun and Clarke's six-phase approach [18] and took an inductive approach to analysis. Our aim was not coder agreement or consensus coding, but interpretive theme development through iterative discussion, consistent with RTA. All authors first read the responses repeatedly to familiarise themselves with the data, taking informal notes throughout. After a first familiarisation, we came together to discuss our first impressions. We then independently generated initial codes inductively in an Excel sheet, capturing both semantic (explicit, surface-level descriptive content) and latent (implicit, underlying ideas or assumptions) meaning within the responses [19]. Through an iterative process of reviewing and refining these codes within three discussions between all coders, we grouped candidate themes into broader patterns. We then held two further meetings to review and refine themes to ensure coherence within themes and clear distinctions between them. Throughout the process, the analysis remained interpretive and reflexive, acknowledging our roles in constructing themes from the data. We further discuss this in Section 3.5. Finally, after refining and naming the themes, we arrived at three themes related to participants' understandings of reflection (RQ1; 4.1), three themes related to how reflection was situated in participants' research practice (RQ2; 4.2), and two tensions related to participants' challenges (RQ3; 4.3.3).

3.5 Positionality

This work invites a deep engagement with reflection from a scientific stance as meta-HCI research. We position ourselves as HCI researchers with an academic interest in reflection as well as deeply reflexive individuals for whom reflection is a central practice in both professional and personal life. Throughout this project, we treated our own reflection as a continuous collaborative practice, embedding it into every stage of the research process: we reflected on what motivated us, what moved us, what concerns we carried, what biases each of us might bring, and what the implications of our findings are for the HCI community. We are a team of three researchers. For two of us, reflection is a primary research topic; for the third, it is an area of interest that grows out of a primary focus on feminist HCI and embodiment. This shaped our collective understanding of reflection, which was grounded in the respective

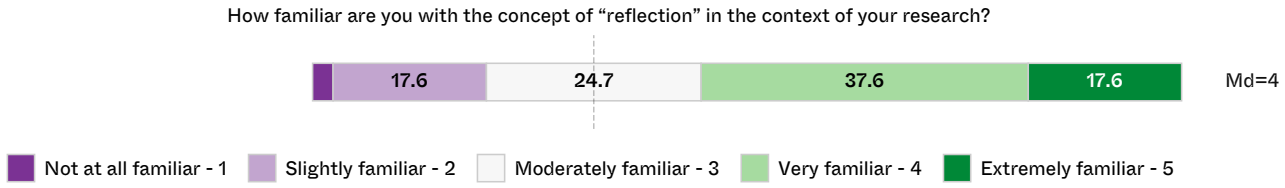


Figure 2: Distribution of participants' self-reported familiarity with the concept of reflection in the context of their research in % (Likert scale: 1 = not at all familiar, 5 = extremely familiar). The median (Md) is shown on the right-hand side of the bar.

bodies of academic literature each of us brought to the work. Our professional backgrounds span fine arts, industrial UX practice, computer science, and HCI, with two authors at the PhD level and one at postdoc level. This breadth allowed us to relate to the diverse perspectives our participants brought and to understand them in relation to the reflection methods and approaches under discussion. Our personal backgrounds collectively shaped and simultaneously broadened what we understand reflection to be. Although all three authors were raised in Western cultural contexts, we each live and work outside our countries of origin. Migration, international mobility, and a genuine personal interest in other cultural traditions have exposed us to perspectives beyond the Western canon, including yogic philosophy [22]. Reflecting on ourselves as a team, we also recognised that our personal histories have profoundly shaped our relationship with reflection: two of us first encountered deep reflection as a psychotherapeutic practice aimed at self-understanding, which subsequently evolved into a broader skill and ongoing life practice. For all three authors, reflection has become an integrated and non-negotiable part of both work and everyday routine. Methodologically, all authors work in a mixed-methods tradition, combining qualitative and quantitative approaches. We additionally engage with creative and deeply reflexive methods, which informed our approach to the design and analysis of this study. The project was initiated by the first author, who led the survey design with feedback from a psychology expert, the third author, and the first author's supervisor. The second author joined the team first as a survey participant and later as a co-author for the qualitative analysis – a trajectory that proved analytically valuable, allowing us to merge the perspective of someone who had not been involved in the survey's design with those who had, as we collectively analysed and reflected on the findings. Finally, we actively acknowledge that this work affected us and our own perception of reflection. We return to it at the end of the paper, where we offer a joint reflection on this and what we see as future work projections.

4 Findings

In this section, we present our findings through quantitative results, six themes, and two tensions, the latter two developed through our RTA. These surface findings that unfold in three movements, tracing our research questions from broad to specific: Themes 1–3 first reveal the diversity in how participants understand reflection (RQ1; 4.1.3), before Themes 4–6 help make sense of that diversity by identifying clearer, more structured "axes" of reflective practice (RQ2; 4.2), and finally two tensions surface what shapes whether reflection can be sustained (RQ3; 4.3.3). Throughout, we use illustrative quotes to support the themes and enrich the quantitative results.

4.1 RQ1: How do HCI researchers understand the concept of reflection within the context of their research?

We examined how HCI researchers understand reflection in their work by analysing participants' reported *familiarity* with reflection (4.1.1) and the *reasons* for engaging with it (4.1.2). These mostly quantitative findings are complemented by qualitative insights into how reflection is *understood* and situated within participants' research and everyday practices in three themes (4.1.3).

4.1.1 Familiarity with Reflection. Although the survey likely attracted participants with an existing interest in reflection, familiarity with the concept varied considerably. Notably, 45% of participants reported being only "not at all" to "moderately" familiar with reflection in the context of their research (see Figure 2). This suggests that reflection, while present in HCI discourse, may not be equally salient or explicitly articulated by all researchers. This is in line with the observations of Singh et al. [55], who found that although reflexive disclosure practices have increased sharply in CHI since 2022, reflection may not be universally conceptualised across the community.

4.1.2 Reasons for engaging in reflection. In a closed-ended question, participants rated how strongly each reason motivates their reflective practice. The results are summarised in Figure 3. Additionally, many participants – although not explicitly solicited – indicated reasons for engaging in reflection within their open-text definition.

In general, the reasons identified in the closed-ended questions align well with the open-text responses. Across participants, reasons for engaging in reflection were primarily centred on *improving research quality* and *supporting ongoing learning*. The five most strongly endorsed reasons all had a median of "agree" (Md=4), and were distinguished by the share of participants selecting "agree" or "strongly agree" (top-2-box): *improving research quality and rigour* (87%), *learning from past experiences or mistakes* (86%), *growing through learning and self-development* (85%), *developing self-awareness and critical thinking* (81%) and *ensuring ethical and responsible research* (80%).

In contrast, motivations related to external expectations or personal well-being were rated lower. *Meeting expectations in one's field*

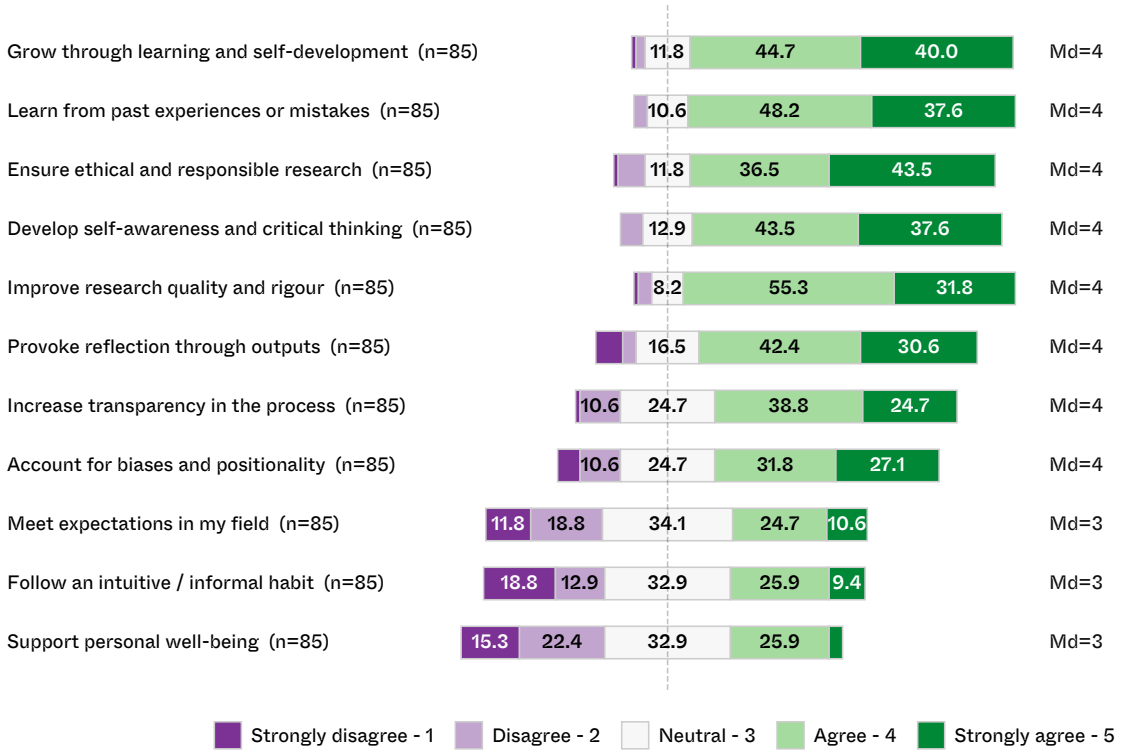


Figure 3: Distribution of responses to the question "To what extent do the following reasons motivate you to engage in reflection in your HCI research?" (in %). Responses are shown on a Likert scale (1 = strongly disagree, 5 = strongly agree). The median is shown on the right-hand side of each bar.

(Md=3) and *supporting personal well-being* (Md=3) both had a median of "neutral", with responses distributed more evenly across the scale: only 35% and 29% of participants selected "agree" or "strongly agree", respectively. While prior work positions personal feelings as a primary trigger for general reflection [40], our findings suggest that participants less frequently frame their reflective practices in context of their research in terms of internal emotional experiences. However, while less frequently reported as a primary reason, a minority still endorsed well-being strongly: 3.5% "strongly agreed" that they reflect to support their personal well-being. For example, participants who described reflection as supporting their well-being framed it as a way of orienting their research towards purpose, values, and fulfilment. For instance, one participant explained that reflection helps them *"stay focused on what is important to me"* and ensure they can feel *"happy and fulfilled with the research I do"* (P19), or adjust course if needed. Others similarly described reflecting on their actions and emotions in ways that support regulation and positive outcomes (P10), acting *"according to my values"* (P50), checking in *"whether the project was worth it"* (P19), or *"staying accountable to the people, contexts and disciplines I work across, as well as towards myself"* (P59). Reflection was also linked to considering broader contexts such as value systems (P63), as well as questioning whether one's work creates *"meaningful impact"* (P83).

Participants' open-text responses further illustrate how other reasons can be explained in practice. For example, in relation to *meeting expectations in one's field*, P73, with a background in industrial design and architecture, explained that *"in my previous education, reflection was built into the curriculum after each course and was given to the respective lecturer together with other deliverables. I usually write a reflection using a template, about every 6 months"*, suggesting that expectations around reflection can be shaped by prior training and institutionalised practices within specific disciplinary contexts.

4.1.3 Understanding of reflection. Next, we report our findings in the form of three themes, derived from the RTA of the open-ended responses to the questions: *"In your own words, how do you define 'reflection' in the context of your HCI research practice?"* and *"Has completing this survey changed how you think about your own reflective practice?"* We approached analysis as a "reflection on reflection" done by our participants. While the latter question did not explicitly ask participants to redefine reflection, the survey might have exposed them to different perspectives and prompted consideration of their own practices. Before turning to these themes, we first outline the range and form of participants' definitions, which contextualises the patterns that follow.

The range and form of participants' definitions. We found a wide range of definitions, varying levels of reflection, and normative assumptions about reflection. Responses to this open-ended question ranged from 4 to 256 words (M=63.8), and varied not only in

content but in approach: some participants treated the question as an invitation to produce a dictionary-like definition, such as *"the act of evaluating the research process"* (P1), or drew directly on existing theoretical accounts, citing Schön [52] or Fleck and Fitzpatrick [31]. Many others took a more personal, descriptive approach, focusing less on defining the term itself than on how they reflect (its timing or content), what goals it serves, and what impact it has on them or their research. We read this variation as an indication of how differently participants approached the task of defining reflection – some offering a compact working definition, others an extended account of their own practice – rather than as evidence of how deeply they understand it, since a brief definition may be carefully considered and a long one diffuse. Participants' definitions varied substantially in their purposes, settings, normative expectations, and accounts of practice. At the same time, the semantic vocabulary used to define reflection was comparatively concentrated: most descriptions framed it as cognitive, evaluative, or corrective work, while embodied, relational, creative, and spontaneous understandings were less visible. We therefore distinguish plurality in what reflection is for and how it is practised from narrower assumptions about what counts as reflection. This pattern resonates with Zhu et al. [66] and Baumer et al. [6], who caution that dominant HCI accounts may leave less familiar dimensions of reflection under-recognised.

Theme 1: On a meta level – reflection as a research sensibility. This theme operates on a more meta level: Rather than examining how participants understand or define reflection in semantic terms, it surfaces participants' meta-cognitive and normative understanding of it as a research sensibility – not merely an awareness of reflection, but an attunement to it: how consciously they hold it, and whether, and how universally, it is expected to be practised. Rather than converging on a single account, this theme brings together several distinct – and at times contradictory – perspectives, spanning from implicit practices that are not always labelled as such, to strong normative assumptions about its presence and importance in HCI research. Thus, it characterises reflection as an unevenly recognised concept in HCI.

Heightened awareness through study participation. A notable share of participants described becoming newly aware of reflective practices through the act of taking the survey itself – as one participant put it succinctly, *"Yes I am reflecting on reflecting"* (P38). For some, this meant realising they already reflect more than they had recognised – for instance that *"it made me aware about using reflection more often than what I'm aware of"* (P1), or that the survey *"made [them] more aware of all the different things [they] do to ensure [they] reflect"* (P43). For others, this awareness extended into a broadening of what reflection could involve. P21 described the change *"in terms of broadening my understanding of all the ways in which I could practice reflection as part of my research"*, while P73 found it *"refreshing to see other media as reflection outcomes. Perhaps audio recordings [...] or drawings or sketches."*

Tacit versus formalised understandings of reflection. For some participants, reflection was less a distinct, labelled activity than an ingrained and largely tacit part of everyday research life. As one participant put it, *"reflection happens most times in my life, and I am hesitant to label it as 'reflection' per se, because it is how I live"* (P2) or that it *"sometimes feels more intuitive than how it is described in research papers"* (P67). In contrast, a minority of participants held markedly more formalised understandings of what reflection requires, such as P73, who *"did not consider meetings with others or feedback with peers or walks as a form of reflection as [they were] taught a reflection is something written"* or defined it as a *"conscious"*, *"rigorous"*, or *"careful"* process.

Reflection as an inherent, yet contested, expectation. Others treated reflection as an inherent expectation of research: *"It seems like an intuitive and obvious thing that one should do as a researcher"* (P40), or *"reflection is a core process of research"* (P23), or *"reflection is part of the design research practice"* (P73) at times even reacting critically to the implication that researchers might not engage in it: *"I was appalled at the thought that a researcher never reflects, as one of the answers in this questionnaire suggested"* (P73). This was contested by one participant, who questioned whether this expectation is culturally specific rather than universal: *"I sometimes feel is the need/call for reflection in HCI work rooted in western culture? Or is it really useful to do 'good research' "* (P28).

Theme 2: Reflection as intellectual labour – limited recognition of alternative forms. How participants defined reflection semantically was, on the whole, relatively narrow: their descriptions consistently gravitated toward a dominant cognitive framing, leaving comparatively little space for alternative ways of understanding the concept. We trace this pattern through the vocabulary participants reached for – and, just as tellingly, did not reach for – to show how the concept is conceptually bounded within HCI.

Reflection as cognitive, evaluative, and corrective labour. Across the vast majority of accounts, reflection is framed as a cognitive and evaluative intellectual labour, using words like *"thinking"*, *"analysing"*, *"evaluating"*, *"examining"*, or even *"judging"*. In this sense, reflection is largely conceptualised as a mental and analytical process, at times resembling a corrective or quality-control mechanism through which researchers assess and refine their work. This framing is further reflected in terms such as *"making sense"*, *"understanding"*, *"distilling meaning"*, which emphasise reflection as a process of intellectual interpretation and synthesis. This framing was often explicitly forward-facing: P47 described reflection as *"considering one's past, recent observations and potential futures to generate advice and plans for oneself and others"*. P8 *"sees reflection as a moment of stepping back to consider work and generate ideas for going forward"*, positioning reflection as inherently productive – a procedural understanding that treats reflection as an actionable process rather than, say, a taking-in of one's current state.

Reflection as a mode of being. In contrast, a minority of participants described reflection from an experiential understanding, as a mode of being, such as a *"higher cognitive state"* (P4), as an *"immersion in a deeply introspective mindset"* (P40), or as *"'sitting' with the research and letting it marinate"* (P67), contrasting the dominant framing of reflection as something that is actively performed, and pointing toward an alternative in which reflection need not be oriented toward future advice or action at all.

Reflection as embodied or creative practice. Similarly, only two responses pointed towards embodied or alternative understandings

of reflection. P47 described reflection as *"creative existence"*, while P44 highlighted how reflective insight can emerge through making: *"Building art and tangible user interfaces as a self reflection and learning practice. I find the act of building things helps with my reflective process, my hands have something practical to do as my brain processes things and I find the output can help highlight things I may have subconsciously missed"*. These accounts, although rare, expand reflection beyond purely cognitive, forward-facing processes and point to alternative understandings. These framings were not strictly either/or: P47, who described reflection here as *"creative existence,"* also characterised it in explicitly cognitive, forward-facing terms as generating *"advice and plans"* – suggesting these conceptions can coexist within a single participant.

Theme 3: Reflection as positioning in research. Participants described reflection as an effort to position themselves and their work in relation to their assumptions, responsibilities, relationships, and the broader contexts in which research unfolds. Reflection is thus not only introspective but also relational and contextual, shaping how researchers understand their influence and responsibility. This understanding emerged along two central facets – awareness of one's own background and biases, and positioning within relationships of power and responsibility.

Awareness of one's background and biases. A central aspect of this positioning involves becoming aware of one's own background, beliefs, and biases, and how these shape the research process. Participants described reflection as *"reflecting upon our biases and being aware of them, together with our backgrounds and beliefs and how they might influence our interpretations and analysis"* (P10), or as *"actively thinking about my own thinking and where it stems from"* (P40). For some, this self-awareness extended beyond questions of research integrity alone: P30 described reflection as *"considering choices and options thoughtfully, weighting off trade-offs, while being fully aware of yourself,"* noting that *"[b]eyond aspects of research integrity or just the 'reflecting on limitations of the research', this has personal dimensions."*

Positioning within power and responsibility. Beyond individual awareness, a few participants also framed reflection as a means of situating themselves within relationships of power and responsibility. This included considering whose perspectives are represented, how decisions are made, and who benefits from the research. For example, one participant described reflection as *"checking in with myself throughout the project, asking why I made certain choices, whose voices i am listening to and reporting, and how my own background and biases may be shaping things. A lot of it is about power and care, especially since I work with a marginalised and vulnerable community"* (P12). Similarly, another researcher reported the need to reflect on their *"power as a researcher collecting data"* and their *"role as a research instrument"* (P71).

4.2 RQ2: How is reflection enacted and valued across practices, stages, and methodological approaches in HCI research?

We were interested to understand the *enactment* of reflection (which practices participants use, and how frequently in 4.2.1), its *distribution* (how reflection is engaged across different stages of the research process in 4.2.2), and its *perceived importance* (how reflection is valued within different methodological approaches in 4.2.3). Additionally, findings from our RTA revealed a more procedural understanding of how reflection is enacted in practice, along three axes: at what scope, in which orientation (inward/outward), and at what point in time (backward/forward). Although participants' semantic definitions of reflection converged around a comparatively narrow, cognitive framing (Theme 2), these axes reveal considerable variety in how participants actually described reflection being practised. We report on these axes as three themes below.

Theme 4: Reflection's scope – from individual decisions to research trajectories. This theme captures how participants scoped reflection differently in terms of breadth. Rather than a simple two-level distinction, this scope forms a continuum from specific decision points, through ongoing engagement across a project, to career-length trajectories and strongly shapes what participants took reflection to actually be about. These findings are further supported by quantitative data reported in Section 4.2.2.

Reflection at specific stages of research. Participants associated reflection with particular stages of research, especially those involving interpretation and evaluation. For instance, one participant highlighted reflection in relation to data interpretation, describing it as *"thinking critically about my beliefs and how they shape my research and how it might unconsciously affect how I interpret my data"* (P21), or *"analysing study data and reflecting on the key insights or main learnings"* (P55). Such accounts position reflection as especially salient at points where meaning is constructed, and decisions are made.

Reflection as sustained engagement across a project. At the level of individual projects, some participants emphasised reflection as an ongoing and continuous process, described as happening *"throughout the research process"* (P40). In this and similar responses, reflection was not limited to discrete moments but accompanies the research process as it develops.

Reflection across research trajectories and careers. At the broadest level, some participants framed reflection as extending across longer research trajectories. For example, one participant described reflection as *"a much bigger thing when it comes to looking at one's own research path across projects or years,"* involving questions such as *"is my research relevant, is it what I want to be doing, am I putting my time and efforts to good use"* (P19). Here, reflection functions as a way of situating one's work within longer-term goals, values, and directions similar to reflective question frameworks proposed in prior work (e.g., [11]). Notably, this broadest-scope framing was, in our data, typically articulated retrospectively – as a backward look across a trajectory rather than a forward-looking one (Theme 6).

Theme 5: Reflection's orientation – between inward and outward reflection. This theme captures how participants' reflection varied in orientation, ranging from inward-facing processes focused on the self to outward-facing considerations of the broader impacts of research. Similar to Theme 4, rather than representing a strict dichotomy, these orientations formed as a continuum, along which reflection expands from personal awareness to relational and societal accountability. We trace this continuum across three levels:

reflection focused on the self, reflection on research practice and discipline, and reflection oriented toward societal impact.

Inward-facing reflection: accountability toward oneself. At the inward spectrum, reflection was described as a means of examining one's own experiences, values, assumptions and staying accountable *"towards oneself"* (P59). Others similarly framed reflection as a deliberate step back from immediate work to consider a bigger personal picture: P72 described reflection as *"stepping back from the day-to-day work, and thinking about the bigger context both for me personally and for academia,"* – already hinting at the continuum's outward reach.

Accountability toward one's research practice and discipline. Moving further outward, reflection was directed towards research practices, including methodological choices and interactions with participants, situating reflection within the conduct of research. This included reflecting on *"micro-ethics of interactions and research encounters"* (P30), or issues of inclusion and accessibility (P1). Moving towards even more outer layers, participants also used reflection *"to be reflexive and responsive to the ever changing discipline of HCI research"* (P53). Similarly, P51 pointed to *"question your own (either as individual researcher, team, or research field) practices and results, to understand the bigger picture and especially potential blindspots"*, contributing to a meta-HCI perspective on reflection.

Outward-facing reflection: accountability toward society. At its most outward-oriented, reflection was closely tied to questions of societal responsibility, ethics, and impact. Participants described reflection as a way of attending to *"how [their] research may impact people and communities"* (P34), and as *"staying accountable to the people, contexts and disciplines [they] work across"* (P59). Further, P59 explained it as a way of ensuring reciprocity and value in research relationships: *"Reflection helps me keep reciprocity central, as through reflecting on my work, I am constantly reminded about its use; it should create value for the people I work for/with rather than just for the HCI community or being published."* This highlights how reflection can orient researchers not only towards awareness and responsibility, but also towards the ethical and practical implications of their work for others.

Theme 6: Reflection's temporal direction – between looking back and anticipating the future. This theme captures how participants described reflection not only as distributed across different stages of research, but also as oriented in different temporal directions. Reflection was framed as spanning past experiences (strong focus), present actions, and future possibilities – and, in some cases, across all three simultaneously.

Retrospective reflection: revisiting the past. Most participants referred to retrospective reflection in their definitions, in which past experiences and outcomes are revisited and reinterpreted. Participants explained *"investigating the research process in hindsight"* (P61) or *"look[ing] back on past work and think about what went well or didn't"* (P79).

Ongoing reflection: embedded in the present. A similar amount of participants described reflection during research activities as an *"ongoing practice"* (P12) embedded within action – and in many cases naming or referring to Schön's concept of reflection-in-action [52].

Table 1: Reflection practices reported by participants. Explicitly collaborative practices are marked with a [C].

Reflection Practice	N	%
Informal self-reflection (e.g., during walks, breaks)	76	89
Team discussions or retrospectives [C]	74	87
Supervisor / peer feedback [C]	65	77
Revisiting and reinterpreting data	56	66
Reflection on ethical considerations	51	60
Writing positionality statements	37	43
Reflexive memos or fieldnotes	33	39
Using autoethnographic approaches	24	28
Keeping a research diary or journal	17	20
Other	5	6

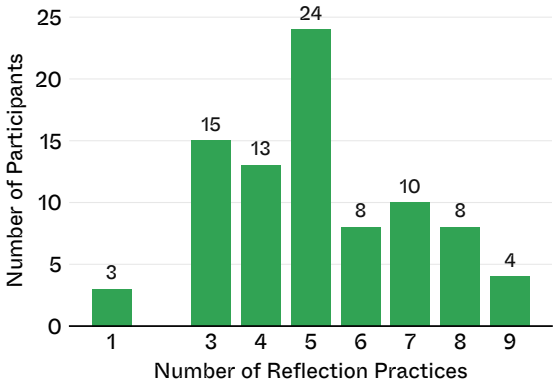


Figure 4: Number of reflection practices per participant.

For example, P35 explained *"commit[ting] to a Schönian approach to reflection which means reflection is always attached to action. Reflection-in-action is a great part of my research practice - especially when engaging people in participatory design"* (P35).

Prospective reflection: anticipating the future. Fewer participants described reflection as a prospective practice that informs planning and anticipates future consequences. This included *"thinking critically through the RQs [...] designing appropriate measurement instruments, and anticipating potential user responses and analysis pathways"* (P45), as well as *"reflect[ing] prospectively on how [research] may be received or challenged"* (P53). Reflection at this stage was also used to identify gaps and biases in advance, for instance by *"proactively doublecheck[ing] [...] potential biases [...] before starting the analysis or making a decision"* (P46), or by *"rethink[ing] if I missed something in my plan or if I have been thorough enough"* (P76).

Reflection spanning multiple temporal directions at once. A few participants thereby explicitly articulated reflection as encompassing multiple temporal directions at once. For example, one participant described reflection as *"considering one's past, recent observations and potential futures to generate advice and plans for oneself and*

others" (P47), while another highlighted how reflection in design research *"can be done in iterative cycles, before and after certain actions"* (P73). Similarly, reflection was described as *"understanding lived experiences, emotions and insights before, while and after doing an activity"* (P85).

4.2.1 Enactment of reflection. Most participants reported engaging with multiple reflection practices (M=5.15) in their research, with relatively few (n=3) reporting only one. Figure 4 shows the distribution of the number of reflection practices reported per participant. This distribution suggests that reflection is typically supported through multiple, complementary practices. 82 participants used three or more reflection practices.

Table 1 summarises the reflection practices reported by participants. Overall, *informal self-reflection* and collaborative practices such as *team discussions* and *peer feedback* are among the most commonly reported – practices that are often expected or required within PhD and research training, rather than elective methodological choices. These practices were not only widely reported but also frequently used, with many participants indicating that they engaged in them "often" or "very often" (see Figure 5). In contrast, more formal or structured practices, such as *keeping a research diary* and *using autoethnographic approaches* – practices researchers can choose to adopt rather than ones typically expected of them – were reported more rarely, and when participants reported using them, they actually employed them less often (see Figure 5).

Additionally, collaborative reflection practices (marked with [C] in Table 1) were widely reported, with most participants (n=78) indicating engagement in one or more collaborative practices, and only a small proportion reporting none (n=7). In their open-text responses, several participants also described reflection as a collaborative activity, for instance, noting that it *"happens when I converse with other people, be it a researcher or someone else"* (P50), or that it is *"often collaborative as it happens with other researchers"* (P55).

Extending beyond "traditional" forms of collaboration, participants also described engaging in reflection with tools such as LLMs, as illustrated by P63:

> *"I've also realized I reflect much better with someone rather than alone. That 'someone' might be a student, a collaborator, or even an LLM chatbot. [...] On one hand, it feels safe that you can externalize your thoughts without feeling judged. On the other hand, it tends to agree with everything you say, and sometimes I worry it could reinforce or amplify my own biases in the process."*

Overall, our findings suggest that reflection practices in HCI are not confined to a single method, but enacted through a combination of practices and heavily rely on informal and collaborative practices.

4.2.2 Distribution of reflection. Across different stages of the research process (Figure 6), reflection was reported most frequently during the *interpretation of results*, with 90.6% of participants indicating they "often" or "always" engage in reflection at this stage. Top-2-box percentages were likewise highest for *writing and publication* (88%), followed by *research design/planning* (83.5%), *design of interventions/artefacts* (82.7%), and *peer feedback and review* (80.5%). In contrast, the top-2-box percentage for *retrospective reflection* after a project or phase was reported the lowest (59.8%), followed by *data collection* (61.9%), and *development/implementation* (62.5%). Although these values remain relatively high overall, with medians of at least "often" for all stages, they indicate a tendency for reflection to be less prominent during these stages compared to the above-mentioned stages of the research process (see Figure 6).

The distribution in Figure 7 indicates that reflection is widely enacted across multiple stages of the research process, with most participants reporting frequent reflection ("often" and "always") in a majority of stages. 18 participants reported to reflect "often" or "always" in all these stages of research.

Looking more closely at specific stages, participants described reflection during the *design of interventions / artefacts* as closely intertwined with iterative decision-making and ongoing sense-making, often aligning with notions of reflection-in-action as described by Schön [52]. For instance, one participant characterised the design process itself as *"in part a reflective process, in which action and reflection influence each other to form a design artifact."* They further explained that *"there is also a reflection outside the actual design process in which the design process is reflected on"* (P14). This was also echoed by P62: *"My understanding of reflection builds heavily on Schön's idea of design as an act of action-reflection, wherein design work [...] is interwoven with reflection leading up to a growing understanding of how that design work unfolds, what it means, and what it can give rise to."*

Although *retrospective reflection* after a project or phase showed the lowest mean frequency across all stages, two participants explicitly referred to structured industry practices such as Scrum: *"In industry, at least from my experience, we do formalized project retrospectives"* (P70) and *"in agile software development methods like Scrum you have dedicated retrospective sessions for reflecting upon challenges and the work of the last sprint in general. Something like that could also be established in a research setting"*

While 38% of participants reported to engage in reflection during *data collection* "never", "rarely" or "sometimes", those who described reflecting "very often" or "always" emphasised that *"having reflexivity while doing research, while data collection and insight formation [avoids] premature narrative forming"* (P66). Further responses highlight an understanding of data collection as a reflexive process, in which researchers' positionality shapes not only the data interpretation but also the data collection, using reflection to *"find patterns/similarities or differences of the procedure of the studies/events and see how that might influence the data and outcome"* (P80). On one occasion, a participant tied this to qualitative methodologies: *"If I am doing thematic analysis for example, I reflect on my power as a researcher collecting data, my role as a research instrument, my perspectives and potential biases, interactions with the literature, and my interpretations of what is going on across my data"* (P71).

This framing was reinforced by another participant, who observed that reflection *"tends to be limited to the research areas where we are already very reflexive"* (P46). This suggests that reflection may be implicitly positioned as a concern of specific methodological traditions, limiting its uptake in areas where reflection is less established.

4.2.3 Perceived importance of reflection. Methods that explicitly foreground the researcher's role and interpretive engagement, such

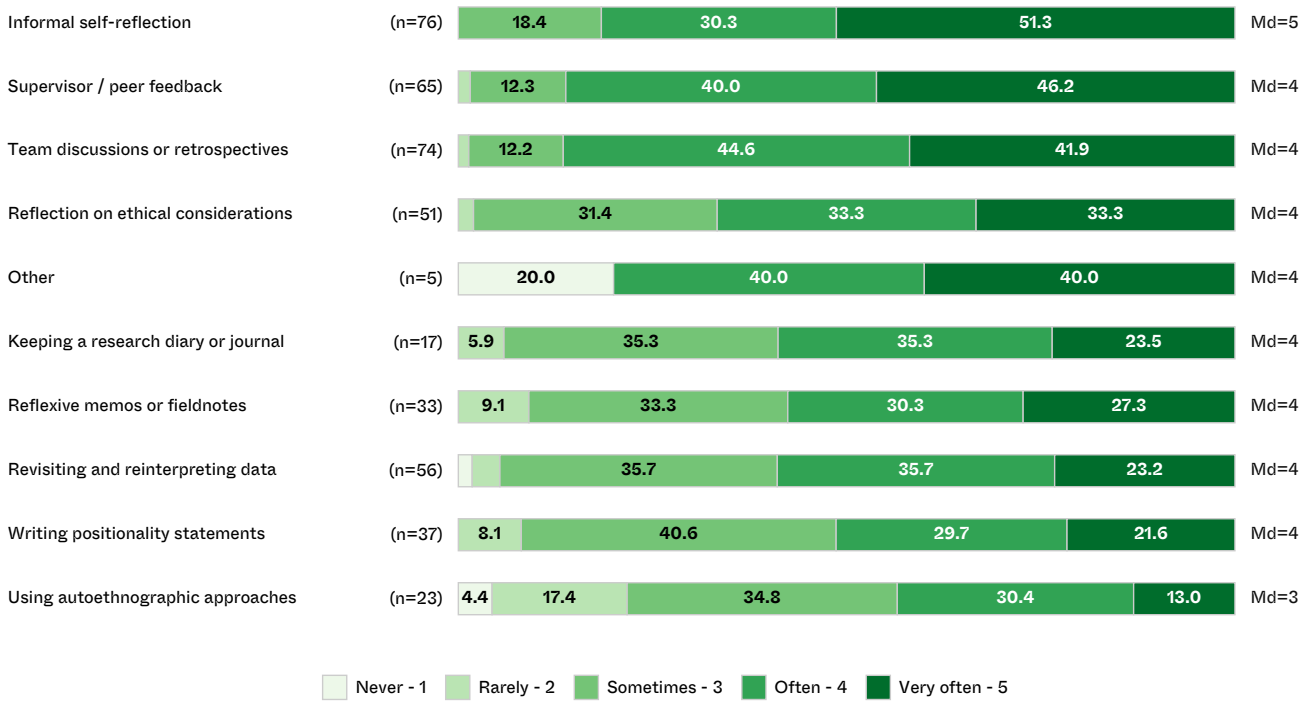


Figure 5: Frequency of engagement in different reflection practices in HCI research in %. (Likert scale: 1 = never, 5 = very often). The median is shown on the right-hand side of each bar. Sample sizes (n) reflect the number of participants who indicated engaging in each practice in a preceding multiple-choice question (see Table 1). Note that some participants reported "never" using a specific practice despite previously indicating that they engage in it.

as *autoethnography*, *research through design*, *participatory* and *ethnographic approaches*, were rated as particularly reliant on reflection. For example, 100% (SD=0.4) of participants using autoethnographic approaches (n=12), 96.9% (SD=0.6) using research through design (n=32), 91.8% (SD=0.8) using participatory design (n=49), and 91.7% (SD=0.8) using ethnographic fieldwork (n=24) reported that reflection within these approaches is "very" or "extremely important", indicating a shared understanding of reflection as integral to these approaches. In contrast, lower-ranked methods such as *machine learning / predictive modelling* (SD=1.3), *quantitative experiments* (SD=1.1), *eye-tracking / physiological sensors* (SD=1.1), or *log / behavioural trace analysis* (SD=1.2) exhibited greater variability, suggesting more divergent views on the role of reflection. Figure 12 in the appendix ranks HCI methods by the participants' experienced importance of these for those who indicated using the respective HCI method.

4.3 RQ3: What enablers, motivators, and challenges influence reflection in HCI research?

To better understand the conditions under which reflection takes place, we examine the support structures (4.3.1, 4.3.2), and challenges (4.3.3) that shape researchers' engagement with reflective practice.

While the majority of participants (63%) "agreed" or "strongly agreed" that they reflect as much as they would like to in their research, 21% "disagreed" (see Figure 8). This divergence suggests that, despite reflection being widely recognised as important, some researchers experience a gap between their aspirations and their actual reflective practices. This notion also surfaced in the open-ended responses, where participants described their own reflective practice as falling short of what they wanted. P55, for example, reflected that *"[taking the survey] has made me aware of how important reflective practice is and that I'd like to do more of it if time allows."*

4.3.1 Enablers of reflection. We asked participants what helps or enables them to engage in reflection during their research. Enablers of reflection were predominantly social and interactional. In particular, the majority of participants reported that key enablers for reflection were engaging in *discussions with colleagues or collaborators* (88%) and *receiving constructive peer feedback* (69%). *Having dedicated time for reflection* (54%) and *engaging with communities of practice* (53%) were also frequently mentioned. In contrast, participants less often reported more individual or formalised practices as enablers. For example, only 35% of participants indicated that *reading literature on reflective methods* supports their reflection, and 18% reported that their *writing research diaries or memos* enabled their reflective practice.

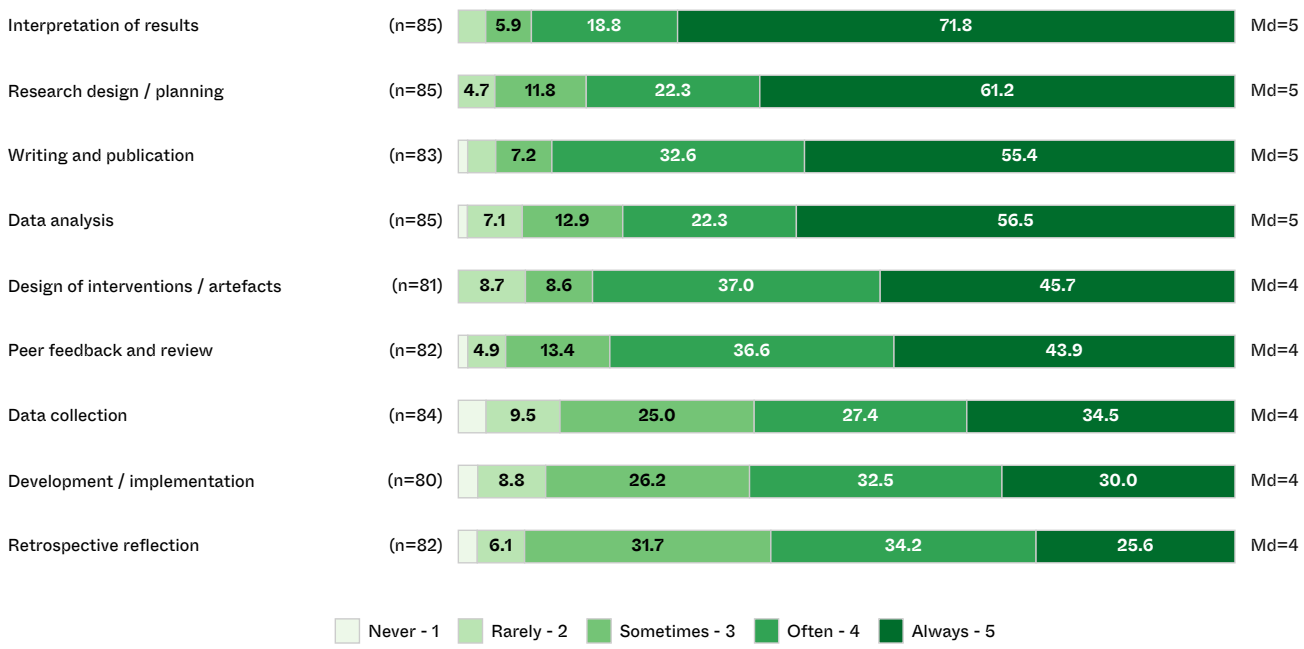


Figure 6: Distribution of responses indicating how often participants engage in reflection at different stages of the research process in % (Likert scale: 1 = never 5 = always). The median is shown on the right-hand side of each bar. Note that the sample size (n) varies, as participants could select *"not applicable"* if they had not engaged in a given stage of the research process.

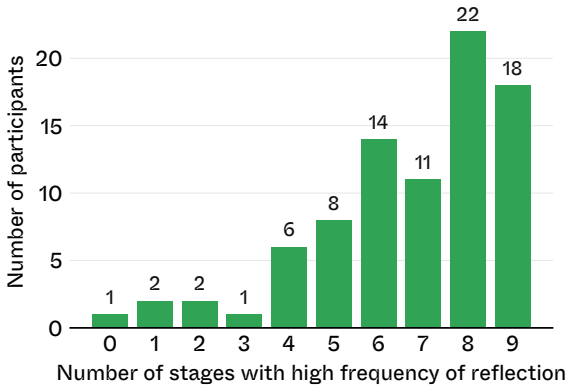


Figure 7: Distribution of participants by the number of research stages in which they report engaging in reflection frequently (ratings "very often" or "always"), indicating the extent to which reflective practice is consistently enacted across the research process.

Additionally, 44% of participants reported that *encountering ethical questions or dilemmas in their research* supports reflection. For example, one participant working in the subfield of health noted *"my user group which is marginalized and often victim of too little reflection"* (P80), while another working in accessibility & aging and health referred to *"historical epistemic violence by researchers in my particular area of research and a wish to do better for my community"* (P44) motivating them to reflect.

The number of enablers reported by participants ranged from one to eight (see Figure 9), with most participants identifying between two and four enablers, indicating that reflection emerges from a combination of enabling conditions.

Participants also added more enablers in their free-text responses. Adding to the enabler *reading literature on reflective methods* two participants mentioned *"reading other people's reflections when included as part of academic papers"* (P44) and *"reading research articles that are reflective"* (P50). Other enablers included: *"involving practitioners"*, *"actively questioning my ideas and argumentation lines and asking the bigger questions (who is this for, how does this contribute to the field or society, what is the value of my work)"*, or *"time & music and random elements"*.

4.3.2 Motivators for reflection. Motivators for engaging in reflection were predominantly internal and socially situated, with *personal motivation* emerging as the most prominent factor (87%). This was followed by *colleagues or peers* (58%) and *collaborators or co-authors* (54%), indicating the importance of immediate research networks. More hierarchical or formal actors, such as *supervisors or mentors* (36%) and *reviewers or editors* (21%), were mentioned less frequently, while *institutional guidelines or requirements* played only a minor role (13%). Open-text responses further highlighted *intrinsic curiosity*, *personal values*, and *a sense of responsibility towards marginalised user groups* as motivators. Other responses also

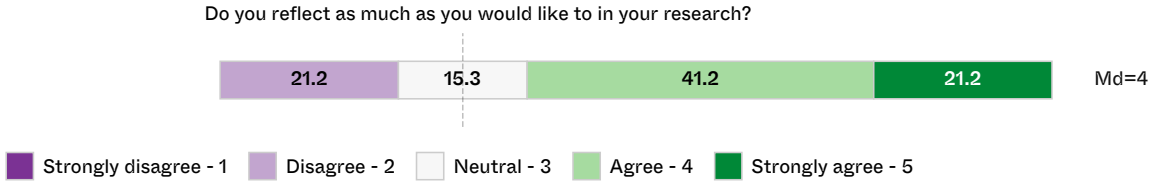


Figure 8: Distribution of participants' responses to whether participants reflect as much as they would like to in their research in % (Likert scale: 1 = strongly disagree, 5 = strongly agree). The median is shown on the right-hand side of the bar.

Table 2: Enablers of reflection reported by participants.

Enablers for reflection	N	%
Discussing with colleagues or collaborators	75	88
Receiving constructive peer feedback	59	69
Having dedicated time for reflection	46	54
Engaging with communities of practice (e.g., special interest groups, working groups)	45	53
Encountering ethical questions or dilemmas in my research	37	44
Institutional or supervisory support	36	42
Personal well-being and work-life balance	36	42
Reading literature on reflective methods	30	35
Writing research diaries or memos	15	18
Other	5	6

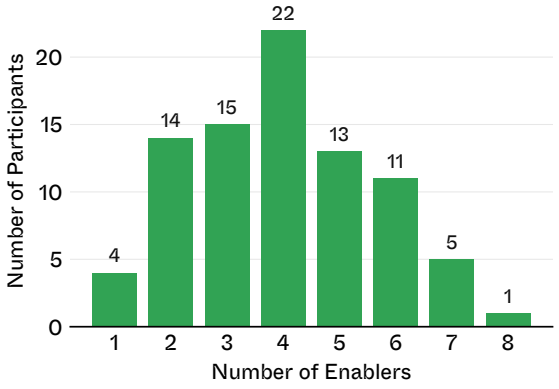


Figure 9: Number of enablers per participant.

pointed to external perspectives, such as engagement with *non-academic audiences*, or *critical awareness of past research practices*, as prompting reflection.

Blurring of personal life and research. Across our findings, reflection appears to blur the boundaries between personal and professional domains. A quarter of participants identified *personal relationships* as a motivator for reflection. Additionally, *personal well-being and work-life balance* were also seen as an enabler of reflection by 42% (see Table 2). This is further supported by the finding that 89% of participants reported engaging in *informal reflection* during everyday activities, such as walking (see Table 1). As P2 describes,

> *"My design research requires a lot of reflection, often in the bus, in bed, in my small gap times throughout the day. In that sense, it is not possible for me to completely separate my research and my personal life. I think reflection is what connects the two."*

This entanglement is also reflected in participants' accounts of how difficult it is to distinguish between personal and research-oriented reflection, with one noting that *"[taking the survey] made me think about when i reflect for myself vs for my research and how intertwined they both are with each other"* (P12). P67 described how personal reflective practices support their engagement with reflection in research: *"I think in general engaging in reflective practices in everyday life helps being continually reflective. For instance, for me going to yoga classes and meditating multiple times per week helps being aware and engage in reflection."*

4.3.3 Challenges. Finally, we examine challenges to reflection, based on the multiple-choice question *"What challenges or barriers, if any, have you encountered when trying to reflect related to your research?"* The full list of responses is summarised in Table 4. 81% of participants stated that they faced more than one challenge, with a reported mean of 3.1 challenges experienced by our participants. See the details in Figure 11. Only 7 participants reported no challenges affected them when trying to reflect, while of the 10 participants who responded that they did not experience any *significant* challenges three still reported at least one challenge to affect them.

In addition to the predefined options, participants provided nuanced examples of challenges that hinder them in their reflection in their optional free-text responses. These examples include *imposter syndrome*, *reviewers*, *uncertainty in articulating reflective processes for validation during review*, *blurred boundaries between work and personal life*, *health issues affecting energy levels*, and *fragmented time*.

To examine whether the challenges vary with researchers' experience, we analysed the effect of years of HCI experience on both individual challenges and the overall number of reported challenges. In particular, to explore whether specific challenges to reflection varied with researchers' experience, we ran a series of exploratory binary logistic regressions, using years of HCI experience as predictor and each challenge item as a binary outcome, applying a

Table 3: Motivators for reflection reported by participants.

Motivators for reflection	N	%
Myself (personal motivation)	74	87
Colleagues or peers	49	58
Collaborators or co-authors	46	54
Supervisors or mentors	31	36
Personal relationships (e.g., family, friends, partners)	21	25
Community norms or expectations	20	24
Reviewers or editors	18	21
Institutional guidelines or requirements (e.g., ethics protocols, review boards)	11	13
Other	8	9

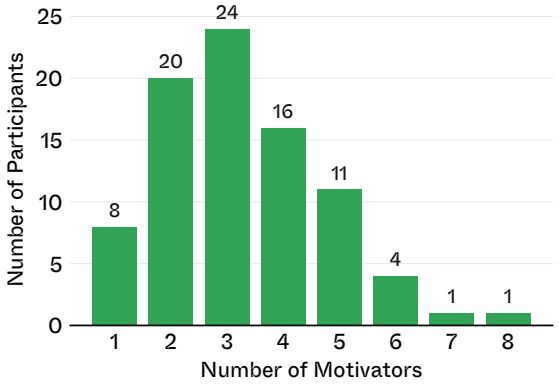


Figure 10: Number of motivators per participant.

Table 4: Challenges to reflection reported by participants.

Challenge to reflection	N	%
Lack of time	47	55
Pressure to produce tangible outputs quickly	39	46
Emotional or cognitive overload	36	42
Difficulty finding collaborators to reflect with	28	33
Feeling that reflection is not valued by peers/reviewers	25	29
Lack of institutional or organisational support	23	27
Lack of methodological guidance	23	27
Uncertainty about how to reflect meaningfully	20	24
Fear of judgement or vulnerability	11	13
Fear of self-criticism	8	9
Other	7	8
I do not experience any significant challenges when reflecting	10	12

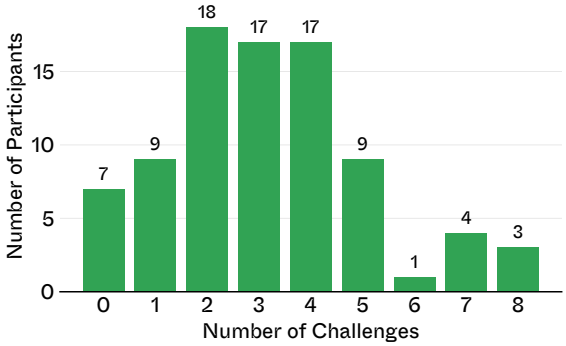


Figure 11: Number of challenges per participant.

Benjamini–Hochberg FDR correction to account for multiple comparisons. *Emotional or cognitive overload* showed a negative association with experience in years ($\beta = -0.13$, OR = 0.87, $p = .009$), suggesting that more experienced researchers may be less likely to report this challenge. However, this effect did not remain statistically significant after correcting for multiple comparisons, and should therefore be treated as indicative rather than conclusive. Full results are reported in the Appendix C. We further examined the relationship between researchers' years of experience and the number of reported challenges to reflection using Spearman's rank-order correlation and observed a moderate negative correlation between years of experience and the number of reported challenges to reflection (Spearman's $\rho = -0.35$, $p = .001$), with more experienced researchers reporting fewer challenges.

Competing commitments surfacing across the data. Beyond responses to the dedicated question on challenges, participants described difficulties in open-text responses throughout the survey. Reporting these as further themes would have largely restated the challenge categories already presented in Table 4. What the open-text material added was not additional challenges but an account of what generates them: participants repeatedly described being caught between commitments they held simultaneously and could not fully honour at once. We therefore shifted the analytic unit from themes, which describe patterns of meaning across the data, to tensions, which name the competing commitments producing those patterns. Applying this criterion, we retained only those challenges that participants articulated as a conflict between two things they valued, rather than as an absence of a resource. Two such tensions were evident across the corpus: one arising where the temporal demands of reflection meet the pace of academic production, and one arising from disagreement over what reflection is epistemically worth. Challenges that did not resolve into a competing commitment – difficulty finding collaborators, for instance – remain reported in Table 4 but are not restated here.

Tension 1: The time-intensive nature of reflection vs. norms of productivity and publishability. Participants frequently described reflection as a time-intensive process that cannot be easily compressed. This was vividly illustrated by one participant, who described it as *"'sitting' with the research and letting it marinate"* (P67), suggesting a process of gradual sense-making rather than immediate insight. Similarly, P50 stated that *"reflection to me means having the time and space to slow down"*, and P62 reported that reflection needs *"making time/space (and saving energy, also emotional) for*

slow thinking throughout a design/research process." This latter statement also points to the challenge of *emotional or cognitive overload*, reported by 42% of participants. However, this need for time stands in tension with the pressures of productivity and publication, as reported in the two most frequently reported challenges: *lack of time* (55%) and *pressure to produce tangible outputs quickly* (46%). P29 explained:

> *"I feel that many peers (an myself) would engage more in reflection, if there was more time to do this. I think the enormous workload and strong pressure to publish really hinders reflection sometimes."*

Further, it is reflected in participants' reports of enabling factors, with 54% identifying *having dedicated time for reflection* as supporting their reflective practice (see Table 2). Beyond the sheer availability of time, one participant (P50) also highlighted *"fragmented time"* as a challenge, noting that reflection is difficult to sustain in short or interrupted intervals.

Tension 2: Epistemological tensions in valuing reflection. 29% of participants reported having the *feeling that reflection is not valued by peers or reviewers*. As P67 criticises, *"I just find it frustrating when trying to engage in new reflective processes it is criticized during the review process. Not every reflective process has to be doing a reflexive thematic analysis."* Extending this critique, P23 questions dominant notions of positivist objectivity in HCI research, suggesting that:

> *"Many researchers believe they can blackbox their own thinking, their inherent biases, their feelings through data, which is a futile attempt at objectification, when in reality data and its analysis can be too easily manipulated both consciously and unconsciously. There is no objective science in this field. Researchers should reflect more and try to obscure less in their work, it should be easier to get published without pretending to publish objective truth."*

In a similar manner, P30 argued:

> *"Qualitative research requires reflectiveness, as own subjectivity cannot be bracketed out, and in fact it would be wrong to pretend it can ever [...] But reflectivity would also be highly important to be nourished in quantitative research, as the choice of research question is subjective (how else can it be explained that only with more women in medicine, topics of female health came up [...])".*

Based on the same argument of quantitative methods not being as *"objective"* and *"bias-free"* as *"people still believe"*, P6 called for *"increased legitimization of reflection and reflective practices in all of the sciences and humanities."* P67 further described *"uncertainty in how to articulate reflective processes in ways that are recognised and validated during review"* as a challenge, suggesting that reflection may not align easily with expectations of scientific reporting. Beyond feeling undervalued, several participants argued that researchers in HCI do not reflect enough as a field. They framed this as a symptom of prevailing epistemological commitments rather than individual failing. P74, for instance, described working with *"too many people who don't think about their own biases, mostly people from a single discipline,"* who *"scoff at interdisciplinary people... who try to point out that there are other ways to think about things."* For P44, these tensions were not only constraining but also motivating, referring to *"epistemic violence by researchers in their particular area of research"* as a motivation to engage more in reflective practice.

5 Discussion

The aim of our study was to examine how reflection is understood, enacted, and shaped within HCI research. Specifically, we investigated how HCI researchers understand the concept of reflection (RQ1), how it is integrated and valued across practices, stages, and methodological approaches (RQ2), and what enablers, motivators and challenges influence its use (RQ3). Our findings reveal a complex picture in which reflection is widely practised, yet, variably defined, embedded in diverse practices, and shaped by both individual and institutional factors.

5.1 What our findings reveal about reflection in HCI

5.1.1 Reflection as contested and contextually constructed. Returning to RQ1 – how HCI researchers understand the concept of reflection in relation to their research processes, design work, or methodological decisions – our findings reveal that reflection in HCI is not a unified concept but a *family* of practices shaped by disciplinary background, epistemological commitments, career stage, and cultural context. This plurality is both a descriptive reality and a normative site of tension. The wide range of definitions in our open-ended responses – from P1's systematic positionality framework (*"from positionality... to methodological approaches... ethical aspects... inclusion and accessibility"*) to a compressed ontology by P82 (*"reflection is research in action"*), or poetic phenomenological imagery from P50 (*"like a lake, which does not hold still but conveys constant movement"*) – is not noise around a shared signal. Rather, it reveals that 'reflection' in HCI pertains to very different things between researchers. This matters for two reasons. First, within our sample, participants invoking the same term were often describing materially different practices, which constrains the extent to which reflection can be discussed, taught, or evaluated as a common object. We are deliberately cautious about extending this observation to the field as a whole. Our participants were HCI researchers rather than specialists in reflection, and greater conceptual alignment may well exist among those who study reflection directly; the ambiguity we observe may therefore reflect the composition of our sample as much as the state of the field. What our data does support is a narrower and still consequential claim: a concept increasingly invoked across HCI's methodological discourse is not, for the researchers expected to enact it, accompanied by a settled account of what enacting it involves [13, 14]. Second, plurality need not be resolved into uniformity; it can instead be treated as a site of productive interrogation, provided the field develops a richer vocabulary for distinguishing the models and levels of reflection it values [31, 35, 66]. Although almost half of our respondents (45%) felt moderately familiar or less, it is worth noting that despite the absence of a stable definition, there is still a desire from respondents to participate in such practices. If there are natural or intuitive

drives to treat HCI in reflective ways, it stands to reason it should be an aspect of practice that deserves closer attention and support.

5.1.2 The tacit majority: reflection that goes unlabelled. Relatedly, in answering RQ1, an additional complexity is that a significant portion of our participants appear to engage in reflection they do not recognise as such, and the act of naming and examining these appears to have immediate meta-cognitive consequences. This suggests that reflective capacities in HCI exist in implicit or unclaimed states. Our survey appears to have functioned as a reflective *trigger* for many participants by itself. Several noted that the act of completing the survey made them aware of practices they had not previously labelled as reflection. That a notable share of an already reflection-attentive sample – people who volunteered for a survey specifically about reflection – reported needing the survey itself to recognise practices they already engaged in is suggestive, though we note this may partly reflect the prompting effect of a detailed survey instrument rather than a general absence of infrastructure. Even accounting for this, it hints that reflection in HCI research may currently lack the visible infrastructure to help researchers recognise reflection they are already enacting. This is something that we find to be substantively interesting as it suggests that HCI's reflective culture is broader and richer than it appears from published record. That a richness of detail may be locked inside individual or collaborative habits that never become explicit, shareable or teachable. In this case, the gap is not in practice - rather the meta-cognitive steps to transform it into something that could benefit others in the community.

5.1.3 Collaboration and the social infrastructure of reflection. Given the collaborative nature of scientific endeavours, it is perhaps unsurprising to see that our sample expounds on the many social aspects of their practices (RQ2, RQ3). In many cases, reflection appears to be sustained by interpersonal networks far more often than individual discipline or formal structures. The image of the solitary reflective practitioner – journaling alone, writing positionality statements in a quiet room – does not fit our data. 88% report *team/colleague discussions* as a key enabler; 91.8% of participants engage in at least one collaborative reflective practice. *Informal self-reflection* is reported by 89% of participants, but this informality often happens at the margins of social interaction (in buses, on walks taken to decompress from meetings, in *"gap times through the day"* as P2 describes). Similarly, even solo reflection in this sample is embedded in a relational context: participants describe reflecting on their conversations, their colleagues' feedback, supervisor expectations. Often, the work of HCI is directed at others as well, and researchers must conduct synthesis between their own thoughts and data on their subjects or participants. Also, it is worth mentioning that *artificial* or *simulated* reflective partnerships were also a feature in our responses; the use of LLMs extends this social logic in a different direction and raises questions about what kind of 'other' is needed to support reflection [8].

5.1.4 The methodological divide: reflection is not evenly distributed. Returning to RQ2 – how reflection is enacted and valued especially across methodological approaches – our sample shows that reflective practice in HCI is unevenly distributed across the methodological spectrum: qualitative researchers report it as integral and near automatic, while researchers working in more technical or quantitative traditions describe it as more uncertain, less habitual, and less validated by their immediate disciplinary contexts. The divide was not the primary object of our analysis but it surfaces consistently across our data. P40 (a qualitative researcher) writes that *"reflection intuitively seems like a fundamental part of research"*; P71 describes deep methodological embedding of reflexivity in thematic analysis. In contrast, P46 notes that reflection *"tends to be limited to the research areas where we are already very reflexive, but it is not sufficiently used in more technical/development areas."* P8 categorises this further as the pull of a *"hard-science epistemology"* in their department that shapes how and whether reflection is valued. This pattern is echoed in our quantitative data (Figure 12): interpretive methods – autoethnography, research through design, participatory and co-design, ethnographic fieldwork, and critical/speculative methods – were rated by participants as most reliant on reflection, while quantitative measurement-driven methods – machine learning, quantitative experiments, eye-tracking, and log data analysis – were rated lowest and most variably. This is not simply individual variation; it maps onto structural features of HCI's heterogeneity as a field, and it has implications for where our recommendations about reflection should be directed. Singh et al. also note that the burden of positionality often falls unevenly on qualitative researchers [55], and our findings extend this: the expectation of reflection is unevenly distributed in ways that create inequity and boundaries between different aspects of our field. Reflective practice in HCI research has relevance across subfields as every area is shaped by methods, values, constraints, and norms. Our data shows a broader application has yet to materialise in practice. We believe the community can benefit from more examples of traditionally 'hard-coded' domains leaning into reflection, and some examples are already worth championing [16].

5.1.5 Reflection across the professional-personal boundary. Our participants consistently describe reflection as a practice that does not respect a boundary between professional research and personal life – and that this entanglement, while sometimes experienced as a burden or a source of concern, is more often a resource that helps them *sustain* practice across contexts. This entanglement appears in different ways, such as during embodied activities that take place outside of the explicit context of their work lives (e.g., walks, yoga, meditation, bus rides); reflection on research that triggers a personal insight; and personal life experiences (e.g., moving abroad, therapy, parenting, identity questioning) that deepen their capacity for reflective practice within their professional responsibilities. This resonates with recent discussions in HCI that highlight how researchers' personal lives and well-being are deeply entangled with their research practices, shaping not only how studies are conducted but also how knowledge is produced [46]. This does not mean HCI should colonise researchers' personal lives in the name of reflection, which would be ethically problematic, but it does mean that institutional approaches to reflection that treat it as a bounded professional competency are working against how reflection actually functions for many of our participants. Arguably, although this may require researchers to behave professionally and responsibly toward aspects where their personal concerns may represent a conflict of interest, it reflects the human focus of HCI

that is also important to celebrate. By reflecting on their own lives, experiences, and perspectives, researchers may become better at appreciating biases that require mitigation or different approaches.

5.2 Tensions that shape reflective practice

5.2.1 The slow vs. fast tension: reflection against the publish-or-perish machine. The most frequently reported barrier to reflection were a lack of time (55%) and pressure to produce tangible outputs quickly (46%). Time is a common fault line in prior work [59] as well, but within the context of HCI this aspect appears to be less of a problem with personal time-management but a structural condition: academic productivity norms actively shape and work against the conditions under which deep reflection becomes possible. It is easy to read this result superficially as a "lack of time" but participants make it clearer in situ that, within the incentive structures of academic life, reflection is often something that can be neglected in consequence to being invisible or implicit. We see that seniority or experience can help and it seems that experienced researchers report fewer challenges. Whether this is because time is more available or reflection more efficient in this case isn't clear and requires further study. What can be said is that junior researchers bear the greatest burden and do so, arguably, at a time where it is of the greatest need.

5.2.2 The normative gatekeeping problem: who decides what counts? Reflective practice in HCI is subject to informal gatekeeping through peer review, training, and disciplinary norms. Certain forms of reflection are recognised and rewarded, while others are treated more critically. This can lead to genuine exclusion (i.e., where cultural norms of reflection are less compatible with established standards of practice) or performative compliance (i.e., where researchers act in ways that align with those standards to appease reviewers). This is something that can have a diluting effect on how meaningful reflection can appear in existing work, such as an observation from P51: *"There's not enough [reflection], but much of what's done feels performative and unhelpful"*. This is to say, the HCI field has developed strong norms around *certain* visible forms of reflection (e.g., positionality statements, RTA, autoethnography) while leaving others – intuitive, collaborative, embodied, non-textual – outside the space of what counts (as also described by [66]). In some cases the gatekeeping can also be internalised as well, P73 made the observation that they had not considered meetings or walks as reflection because they was *"taught reflection is something written"* captures exactly this normalisation of a narrow form. This is related to, but distinct from the epistemological tension that follows: this gatekeeping problem is about legitimacy within existing norms, not about whether those norms are correct in themselves.

5.2.3 The epistemological tension: objectivity myths and the visibility of bias. Some participants directly challenge dominant assumptions of objectivity in HCI and argue reflection is not a qualitative speciality, but a universal epistemic requirement. That any belief that data solely 'speaks for itself' is short-sighted. P23 puts it plainly, *"Many researchers believe they can blackbox their own thinking, their inherent biases, their feeling through data, which is a futile attempt at objectification... There is no objective science in this field."*, articulating a concern about objectivity myths that emerge in multiple responses and connects to the finding that only 31.8% of our sample is "strongly" motivated to reflect to *"improve research quality and rigour"*. The epistemological tension matters because it frames the choice not to reflect as a coherent (if contested) position, not just an oversight. Aspects and consequences of these tensions can be seen elsewhere, for example, Niksirat et al. [41] provide empirical evidence that transparency norms have improved unevenly.

5.3 Ways forward: actions toward a reflective research culture in HCI

5.3.1 Name and document existing informal practices as reflection (in papers, pedagogy, and lab culture). One of the most accessible and impactful interventions for fostering reflective practice in HCI is the cultivation of meta-cognitive awareness – the capacity to recognise one's existing practices as reflection, to name them, and thereby to make them available for deliberate development or transmission. Our data provides evidence that naming matters. Participants who completed the survey frequently reported that the act of completion itself generated new meta-cognitive awareness of their practice. This is a low-cost, high-leverage intervention: not new training, not structural reform, but the provision of a reflective vocabulary. The implication for HCI as a community is that *documentation* of reflective practices – in papers, in pedagogy, in lab cultures – has an activation effect beyond its informational value. When researchers find utility in the reflective practices of peers (e.g., P40 on reading Braun & Clarke, or that reading methodological papers *"inspire me to engage more deeply"*) it suggests that they are not only being informed; they are also being triggered towards action. When reflective practices are unrecognised, they cannot be labelled or properly recognised in ways that extend beyond the individual practice and into the wider community. It stands to reason that HCI work should encourage researchers to name and document their existing informal practices (e.g., walks, discussions, data immersion) as reflection more frequently. Making these things more visible has intrinsic value. P62 in our survey even suggests survey-style instruments or a framework for junior researchers, making these important tools to equip incoming doctoral students (who appear to have greater need for these competencies than their superiors).

5.3.2 Make room for alternative (non-written) forms of reflection: embodied, collaborative, and non-Western reflection. If HCI is to foster genuine, rather than performative reflection, the field must broaden its conception of what reflection looks like, explicitly recognising and welcoming collaborative, embodied, non-textual, and non-Western or non-WEIRD forms of it [66]. This would sit alongside the written, individual, staged retrospection that currently dominates but *extend* it in important ways. Our data shows that the most common forms of reflection in practice are not the forms most visible in publications. *Informal self-reflection*, *team discussions*, and *peer feedback* together account for the most prevalent practices – yet these are precisely the forms that some respondents did not realise or count as reflection because they were led to believe it was only *"something written"*. The mismatch between what is practised and what is recognised creates a legitimacy gap that has real consequences: practices that go unnamed cannot be evaluated, refined, or transmitted. It also makes it harder for other researchers to

properly test, replicate, or understand these works [41]. We suggest that publication formats should make space for brief accounts of non-written reflective processes (team discussions, iterative data sessions, walks-as-thinking) in much the same way it has become common practice to declare conflicting interests, or influencing factors. It is also important that peer-review culture improves to avoid conflation – standards we apply to certain methods that may *involve* reflection (e.g., RTA) do not necessarily hold for evaluating other forms of reflection. Greater acceptance of reflective documentation could also include more artefactual forms as well, audio or visual recordings can add important texture to the cognitive processes of researchers and paint a more vivid picture of methodological rigour than text alone can provide. Fundamentally, all of this requires that the HCI community finds more ways to expose itself to a greater number of reflective traditions than it has permitted so far. HCI education already emphasises that research subjects are complex entities, whom we should be cautious of marginalising or excluding. It is important for our community and standards to avoid homogeneity that does not reflect the diversities that count amongst our greatest strengths as a field.

5.3.3 Shift reflection from personal virtue to institutional infrastructures. Sustainable reflective practice in HCI requires structural support – protected time, community formats, and publication norms – that shift reflection from a personal virtue (present or absent in individual researchers) to an institutional expectation with corresponding resources. Our data shows that *personal motivation* is the overwhelming driver of reflection (87%) while *institutional support* is cited by only 42% as an enabler, and only 13% of participants identify *institutional guidelines* as a motivator. This asymmetry is a structural problem: a field that relies on personal motivation to sustain practices that run counter to dominant productivity incentives will see those practices erode as pressure increases. The experience gradient (more experience → fewer challenges) suggests that senior researchers have found ways to protect reflective space that junior researchers have not – but this is individual adaptation, not institutional provision. We suggest that time for reflection and deceleration should be time that is actively protected and encouraged in funded research projects (as a line item, not an afterthought or implicit expectation that can easily be discarded). Community practice structures (e.g., SIGs, working groups that provide regular opportunities for reflective practice; 53% already cite *CoP engagement* as an enabler), this is something that could be formalised and expanded on. We believe these structural and institutional changes (as well as the ways it can be enforced interpersonally in the following section) are likely to be increasingly important in the coming years. Given the ways in which reflection can often be disregarded amidst a performative model of work, the recent scaling and acceleration associated with AI will not make this problem any better. We believe reflection is included in core competencies that will be more and more essential for researchers moving forward – we are uniquely positioned in ways where it is imperative to consider the tools we use to realise our research, and those that we create for others in the process. This prescription was also present in our sample, for example P70 states *"I think with the rise of AI tools for HCI research, we as a discipline need to continue reflecting on how we will evolve as a practice and drive value for a company"*. Thankfully we are at a point in time where self-awareness and recognition of such a need is still evident; it would be problematic to assume that it will continue being so (or continue to provoke such behaviours) if there is not more done to formalise the precedent or give researchers permission to do so. Simply assuming these competencies will develop, or that infrastructure to enable it doesn't need to be established may be short-sighted as we venture into a period of HCI that is likely to involve tremendous acceleration and pressure.

5.3.4 Teach reflection explicitly – embed it in methods curricula, have supervisors model it, and credit reflective transparency in peer review rather than treating it as a weakness. Reflective norms are transmitted through academic socialisation – through what supervisors model, what curricula include, and what publication rewards – and changing them therefore requires intervention at each of these transmission points. Many of our respondents describe actively teaching or benefiting from mentorship that is constructive and supporting of reflective practice. This demonstrates that the transmission of reflective norms is already happening, but it is often *uneven* and largely *informal*. In practice we believe the practical recommendations emerging from the data include explicit inclusion of reflection in HCI methods courses – diverse frameworks, not only positionality statements. Junior researchers are watching what their senior colleagues do and don't, therefore it is imperative that supervisors model such behaviours and encourage it (44.7% of our sample were PhD students). When it comes to publications themselves, HCI work can make reflective processes more visible – the "messiness" that Boehner et al. [12, 13] describe as valuable – serving an educational function for readers. This standard is also something to normalise in the review process itself, crediting reflective transparency instead of treating it as a methodological weakness. These suggestions would be in alignment with the thinking on pedagogical strategies for reflection in project-based HCI education by authors like Roldan et al. [50], it is also corroborated by a similar shift in strategy seen in other fields like nursing [2], education [1], and cognitive therapy training [7]. We believe the notion of reflection as a teachable professional capacity is also an applicable model for HCI, especially given the extent that issues are frequently multi-layered and challenged by the nuances of human life.

5.4 Limitations

For recruitment, we used a combination of social media, mailing lists targeting HCI researchers, university distribution lists, direct contacts, and snowball sampling (as further described in Section 3.3). As participation was voluntary, the sample may include a higher proportion of researchers interested in reflection. Recruitment through professional networks and snowball sampling may also have shaped the sample, reflecting existing social and institutional connections, with some regions, disciplines, or research communities represented more strongly than others. It should also be noted that our sample consisted of only 19.8% of participants (n=81) who reported their country of origin in the global south. Above that, 83 researchers were affiliated with the global north, with a significant majority from Europe (n=70) and North America (n=13), despite numerous efforts to include a wider array of participants. Finally, recruitment relied on the mailing lists available to

us and was extended through snowball sampling, as participants shared the survey within their own communities. As a result, representation across HCI subfields and SIGCHI venues may vary, with stronger coverage of communities more directly connected to these recruitment channels. The findings, therefore, reflect the situated nature of our sample and are best interpreted in relation to this specific context.

Beyond our sampling choices, the survey design may also shape the perspectives captured in our data: We provided a working definition of reflection to establish a shared point of reference, while presenting it only after participants had described reflection in their own terms. This working definition may nevertheless have influenced how participants framed their subsequent responses by making a particular understanding of reflection more salient. Relatedly, our survey also relied on participants' awareness and articulation of their reflective practices, which may capture tacit or in-action reflection less directly. At the same time, our working definition and answer options explicitly included these forms of reflection. They may have helped participants recognise practices they had not previously identified as reflective, as discussed in Section 4.1.3.

5.5 Reflection on our research process and future work

Engaging with this research profoundly deepened our engagement with the components of reflection and expanded the breadth of what accompanies reflective practices, even if it did not fundamentally change our prior understanding of reflection itself. We began with a shared philosophical stance that we would describe as human-centred, agency-oriented, and design-informed, with a critical perspective on reflection and practice. In this paper we consciously chose not to address the philosophical dimensions of reflection, given the high level of interpretation that written data of this kind demands. However, we foresee this as an important avenue for future work – specifically, how philosophical stance shapes reflective practice and the perceived value of reflection.

Relatedly, while our survey data allowed us to characterise the range and structure of participants' definitions of reflection, explaining *why* individual participants hold particular definitions – for instance, whether these are shaped by disciplinary training, mentorship, or exposure to specific theoretical accounts – exceeds what a one-shot, open-ended survey response can support. Semi-structured interviews, with the opportunity for follow-up probing, would be better suited to surfacing this explanatory depth, and we see this as a valuable direction for future work.

Other topics we only touched upon were *epistemic violence*, which is being addressed in HCI in such areas as disability [65] and *technofascism* [25]. In our team reflections we mapped them as potential consequences of the absence of reflection. While many participants noted the importance of reflection as a means of avoiding negative impact on the world, the most extreme scenarios of what ignoring reflection might produce were not prominently in view. We would encourage other researchers to revisit this particular aspect of our findings on the perceived value and consequences of reflection, approaching it also from the perspective of worst-case outcomes. Doing so may ultimately support more informed adoption of reflective practice and help shift the cost-benefit calculation away from a culture of fast publishing toward research more deeply grounded in values.

A further insight our collective team reflection on the research process surfaced concerns the relationship between reflection and *culture of error*, echoing recent work that foregrounds the value of anticipating and making potential failures visible in design [60]. As researchers, we are constantly learning and revising both ourselves and our working approaches. Regular reflection – and reflection on reflection – creates the perspective needed to see, acknowledge, and address our mistakes. We believe that making reflection a publicly acceptable and sufficiently normalised practice could also positively shape academic culture more broadly, creating space for open discussion of mistakes and relieving some of the perfectionist pressure that currently pervades the field.

As a final note, we wish to propose one concrete direction for future work that might help bring this about. All three of us are engaged in teaching and have a close perspective on junior researchers who are finding their footing in academia. We believe that further exploration of reflective approaches could begin to shape a practical reflection toolbox for researchers at all stages. We observed how significant a shift reflexive thematic analysis [18] brought in normalising reflection at the analysis stage of research. Extending this kind of structured, method-level support to other stages of the research process – and to other modes of reflecting – is a promising avenue well worth pursuing.

5.6 Conclusion

Reflection is often invoked in HCI as an *aspect* of responsible, rigorous, and ethical research. We find, however, in our study, that it is not understood in uniform ways or evenly supported or encouraged in *formal* ways. Based on a survey of 85 HCI researchers, we mapped how reflection is defined, enacted, valued, enabled, and constrained across research practices. Our findings show that reflection in HCI is best understood, not as a single method or individual disposition, but as a family of situated practices: cognitive and embodied, individual and collaborative, retrospective and anticipatory, personal and structural. We found across our data that, although reflection was widely practised, it can often be *informal*, *tacit*, and on the margins of recognised academic work. Respondents provide examples of multiple techniques but also include admissions that at many times they will neither name nor legitimise them in published work. The main implication of our work is that HCI needs to move beyond treating reflection as a private virtue or optional methodological add-on. A reflective research culture requires shared vocabularies, protected time, and scaffolding that reinforces broader integration. Because HCI research is often shaped by assumptions, values, contexts, and institutional pressure, it matters that this be established as transparent and normalised *documentation* - rather than as a performative disclosure. In line with calls to pluralise reflection in HCI, this also means making space for alternative forms of reflective practice emerging from different cultures or perspectives (e.g., collaborative, embodied, relational, and non-textual). By making reflective practices more visible and discussable, HCI can better support researchers in examining not only their own positions and decisions, but also the wider structures that shape what kinds of knowledge the field produces, values, or publishes. Ultimately, reflection should not be understood as slowing

HCI down for its own sake, but as a way of helping the field move with greater care, accountability, and wisdom. As HCI continues to confront increasingly complex social, ethical, and technological questions, reflection offers a means of keeping research practice open to questioning, learning, and change. Reflection may be one of the greatest ways to preserve and connect in genuine ways with the human aspect of our work, particularly relevant to a field that is situated centrally in the accelerating changes in what is possible to simulate or approximate artificially.

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References

[1] Z. Abilova and K. Menilbaeva. 2024. Pedagogical Reflection is a Tool for the Professional Development of Future Pedagogical Specialists. 10, 6 (2024), 544–550. doi:10.33619/2414-2948/103/62

[2] Maryam Bagheri, Fariba Taleghani, Parvaneh Abazari, and Alireza Yousefy. 2019. Triggers for reflection in undergraduate clinical nursing education: A qualitative descriptive study. 75 (2019), 35–40. doi:10.1016/j.nedt.2018.12.013

[3] Shaowen Bardzell. 2010. Feminist HCI: taking stock and outlining an agenda for design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Atlanta, Georgia, USA) *(CHI '10)*. Association for Computing Machinery, New York, NY, USA, 1301–1310. doi:10.1145/1753326.1753521

[4] Gregory Bateson. 1972. *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology.* Chandler Publishing Company.

[5] Eric P.S. Baumer. 2015. Reflective Informatics: Conceptual Dimensions for Designing Technologies of Reflection. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (Seoul, Republic of Korea) *(CHI '15)*. Association for Computing Machinery, New York, NY, USA, 585–594. doi:10.1145/2702123.2702234

[6] Eric P.S. Baumer, Vera Khovanskaya, Mark Matthews, Lindsay Reynolds, Victoria Schwanda Sosik, and Geri Gay. 2014. Reviewing Reflection: On the Use of Reflection in Interactive System Design. In *Proceedings of the 2014 Conference on Designing Interactive Systems (DIS '14)*. Association for Computing Machinery, New York, NY, USA, 93–102. doi:10.1145/2598510.2598598

[7] James Bennett-Levy, Frederick Turner, Taryn Beaty, Michelle Smith, Bethany Paterson, and Sarah Farmer. 2001. The Value of Self-Practice of Cognitive Therapy Techniques and Self-Reflection in the Training of Cognitive Therapists. 29, 2 (2001), 203–220. doi:10.1017/S1352465801002077

[8] Marit Bentvelzen, Paweł W. Woźniak, Pia S.F. Herbes, Evropi Stefanidi, and Jasmin Niess. 2022. Revisiting Reflection in HCI: Four Design Resources for Technologies that Support Reflection. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 6, 1, Article 2 (March 2022), 27 pages. doi:10.1145/3517233

[9] Susanne Bødker. 2006. When second wave HCI meets third wave challenges. In *Proceedings of the 4th Nordic Conference on Human-Computer Interaction: Changing Roles* (Oslo, Norway) *(NordiCHI '06)*. Association for Computing Machinery, New York, NY, USA, 1–8. doi:10.1145/1182475.1182476

[10] S. Bødker, C. Dindler, O.S. Iversen, and R.C. Smith. 2022. *Participatory Design.* Morgan & Claypool.

[11] Susanne Bødker, Kasper Hornbæk, Antti Oulasvirta, and Stuart Reeves. 2016. Nine questions for HCI researchers in the making. *Interactions* 23, 4 (June 2016), 58–61. doi:10.1145/2949686

[12] Kirsten Boehner, Rogério DePaula, Paul Dourish, and Phoebe Sengers. 2007. How emotion is made and measured. *International Journal of Human-Computer Studies* 65, 4 (2007), 275–291. doi:10.1016/j.ijhcs.2006.11.016 Evaluating affective interactions.

[13] Kirsten Boehner, Carl DiSalvo, Mads Bødker, and Rogério De Paula. 2007. The increasing value of reflection: A discussion of reflective HCI. *Interfaces* 72 (2007), 20–23.

[14] Kirsten Boehner, Janet Vertesi, Phoebe Sengers, and Paul Dourish. 2007. How HCI Interprets the Probes. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (San Jose, California, USA) *(CHI '07)*. Association for Computing Machinery, New York, NY, USA, 1077–1086. doi:10.1145/1240624.1240789

[15] David Boud, Rosemary Keogh, and David Walker. 1985. Promoting Reflection in Learning: A Model. In *Reflection: Turning Experience into Learning*, David Boud, Rosemary Keogh, and David Walker (Eds.). Nichols Publishing Company, New York, NY, USA, 19–40.

[16] Alicia E. Boyd. 2023. Reflexive Practices in Software Engineering. In *2023 IEEE/ACM International Workshop on Equitable Data & Technology (FairWare)*. 8–13. doi:10.1109/FairWare59297.2023.00006

[17] Evelyn M. Boyd and Ann W. Fales. 1983. Reflective Learning: Key to Learning from Experience. *Journal of Humanistic Psychology* 23, 2 (1983), 99–117. doi:10.1177/002216788323201

[18] Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2 (2006), 77–101. doi:10.1191/1478088706qp063oa arXiv:https://www.tandfonline.com/doi/pdf/10.1191/1478088706qp063oa

[19] Virginia Braun and Victoria Clarke. 2021. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research* 21, 1 (2021), 37–47. doi:10.1002/capr.12360 arXiv:https://onlinelibrary.wiley.com/doi/pdf/10.1002/capr.12360

[20] V. Braun and V. Clarke. 2021. *Thematic Analysis: A Practical Guide.* SAGE Publications.

[21] Virginia Braun, Victoria Clarke, Elicia Boulton, Louise Davey, and Charlotte McEvoy. 2021. The online survey as a qualitative research tool. *International Journal of Social Research Methodology* 24, 6 (2021), 641–654. doi:10.1080/13645579.2020.1805550 arXiv:https://doi.org/10.1080/13645579.2020.1805550

[22] Edwin F. Bryant and Patañjali. 2009. *The Yoga sūtras of Patañjali: a new edition, translation, and commentary with insights from the traditional commentators* (first edition ed.). North Point Press, New York.

[23] Inha Cha, Ajit G. Pillai, and Richmond Y. Wong. 2024. Ethics Pathways: A Design Activity for Reflecting on Ethics Engagement in HCI Research. In *Proceedings of the 2024 ACM Designing Interactive Systems Conference* (Copenhagen, Denmark) *(DIS '24)*. Association for Computing Machinery, New York, NY, USA, 3515–3533. doi:10.1145/3643834.3660714

[24] Tatiana Chakravorti, Sanjana Gautam, and Sarah Rajtmajer. 2025. Open Science Practices among Early-Career Human-Computer Interaction Researchers in the US. 20, 11 (2025), e0334692. doi:10.1371/journal.pone.0334692

[25] Mark Coeckelbergh. 2026. Technofascism: Ai, Big Tech, and the New Authoritarianism. *AI and Society* (2026), 1–14. doi:10.1007/s00146-026-02862-9

[26] Audrey Desjardins and Aubree Ball. 2018. Revealing Tensions in Autobiographical Design in HCI. In *Proceedings of the 2018 Designing Interactive Systems Conference (DIS '18)*. Association for Computing Machinery, New York, NY, USA, 753–764. doi:10.1145/3196709.3196781 event-place: Hong Kong, China.

[27] John Dewey. 1910. *How We Think.* D. C. Heath and Company.

[28] John Dewey. 1933. *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process.* D.C. Heath and Company, Boston.

[29] Linda Finlay. 2002. "Outing" the Researcher: The Provenance, Process, and Practice of Reflexivity. *Qualitative Health Research* 12, 4 (2002), 531–545. doi:10.1177/104973202129120052 arXiv:https://doi.org/10.1177/104973202129120052 PMID: 11939252.

[30] Linda Finlay and Brendan Gough. 2008. *Reflexivity: A Practical Guide for Researchers in Health and Social Sciences.* 1–255 pages. doi:10.1002/9780470776094

[31] Rowanne Fleck and Geraldine Fitzpatrick. 2010. Reflecting on Reflection: Framing a Design Landscape. In *Proceedings of the 22nd Conference of the Computer-Human Interaction Special Interest Group of Australia on Computer-Human Interaction (OzCHI '10)*. Association for Computing Machinery, New York, NY, USA, 216–223. doi:10.1145/1952222.1952269

[32] Patricia Garcia and Marika Cifor. 2019. Expanding Our Reflexive Toolbox: Collaborative Possibilities for Examining Socio-Technical Systems Using Duoethnography. 3, CSCW (2019), 1–23. doi:10.1145/3359292

[33] Anthony Grant, John Franklin, and P Langford. 2002. The self-reflection and insight scale: A new measure of private self-consciousness. *Social Behavior and Personality* 39 (01 2002), 172–173. doi:10.2224/sbp.2002.30.8.821

[34] Michel Hohendanner, Chiara Ullstein, Axel Böttcher, Paul Gong, and Jens Grossklags. 2025. Eliciting Change Towards Better Virtual Worlds: A Workshop Process to Foster Ethical Reflection in Creative Technology Design Processes. In *Proceedings of the 2025 Conference on Creativity and Cognition (C&C '25)*. Association for Computing Machinery, New York, NY, USA, 83–98. doi:10.1145/3698061.3726965

[35] Annika Kaltenhauser, James Arnéra, Amelie Unger, Sophia Ppali, Niels van Berkel, Benjamin Tag, Elena Glassman, Phoebe Sengers, Simo Hosio, and Jonas Oppenlaender. 2026. Meta-HCI: Practising Reflection in HCI Research. In *Extended Abstracts of the 2026 CHI Conference on Human Factors in Computing Systems* (Barcelona, Spain). Association for Computing Machinery, New York, NY, USA,

1–4. doi:10.1145/3772363.3778877

[36] Annika Kaltenhauser, Evropi Stefanidi, and Johannes Schöning. 2024. Playing with Perspectives and Unveiling the Autoethnographic Kaleidoscope in HCI – A Literature Review of Autoethnographies. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) *(CHI '24)*. Association for Computing Machinery, New York, NY, USA, Article 819, 20 pages. doi:10.1145/3613904.3642355

[37] Shivani Kapania, Ruiyi Wang, Toby Jia-Jun Li, Tianshi Li, and Hong Shen. 2025. 'I'm Categorizing LLM as a Productivity Tool': Examining Ethics of LLM Use in HCI Research Practices. *Proc. ACM Hum.-Comput. Interact.* 9, 2, Article CSCW102 (May 2025), 26 pages. doi:10.1145/3711000

[38] David A. Kolb. 1984. *Experiential Learning: Experience as the Source of Learning and Development*. Prentice-Hall, Englewood Cliffs, NJ, USA.

[39] Sebastian Linxen, Christian Sturm, Florian Brühlmann, Vincent Cassau, Klaus Opwis, and Katharina Reinecke. 2021. How WEIRD is CHI?. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (Yokohama, Japan) *(CHI '21)*. Association for Computing Machinery, New York, NY, USA, Article 143, 14 pages. doi:10.1145/3411764.3445488

[40] Ine Mols, Elise van den Hoven, and Berry Eggen. 2016. Informing Design for Reflection: an Overview of Current Everyday Practices. In *Proceedings of the 9th Nordic Conference on Human-Computer Interaction* (Gothenburg, Sweden) *(NordiCHI '16)*. Association for Computing Machinery, New York, NY, USA, Article 21, 10 pages. doi:10.1145/2971485.2971494

[41] Kavous Salehzadeh Niksirat, Lahari Goswami, Pooja S. B. Rao, James Tyler, Alessandro Silacci, Sadiq Aliyu, Annika Aebli, Chat Wacharamanotham, and Mauro Cherubini. 2023. Changes in Research Ethics, Openness, and Transparency in Empirical Studies between CHI 2017 and CHI 2022. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–23. doi:10.1145/3544548.3580848

[42] Chris North, Remco Chang, Alex Endert, Wenwen Dou, Richard May, Bill Pike, and Glenn A. Fink. 2011. Analytic Provenance: Process + Interaction + Insight. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Vancouver, BC, Canada). ACM. doi:10.1145/1979742.1979570

[43] Jonas Oppenlaender. 2025. Past, Present, and Future of Citation Practices in HCI. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI '25)*. Association for Computing Machinery, New York, NY, USA, Article 453, 16 pages. doi:10.1145/3706598.3713556

[44] Rock Yuren Pang, Hope Schroeder, Kynnedy Simone Smith, Solon Barocas, Ziang Xiao, Emily Tseng, and Danielle Bragg. 2025. Understanding the LLM-ification of CHI: Unpacking the Impact of LLMs at CHI through a Systematic Literature Review. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–20. doi:10.1145/3706598.3713726

[45] Andreas Philippi. 2018. *The Reflective HCI Practitioner: A Study of Problem Framing in Human-Computer Interaction Practice*. Master's thesis. Umeå University. http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-146501

[46] Sophia Ppali, Marios Constantinides, Fotis Liarokapis, Jaydon Farao, Soraya S. Anvari, MinYoung Yoo, Ferran Altarriba Bertran, Shannon Rodgers, Jihae Han, Rina R. Wehbe, Margot Brereton, and Alexandra Covaci. 2025. Cite Your Well-being First: What Happens When Personal Life, Mental Health, and HCI Research Become Entangled?. In *Companion Publication of the 2025 ACM Designing Interactive Systems Conference (DIS '25 Companion)*. Association for Computing Machinery, New York, NY, USA, 52–56. doi:10.1145/3715668.3734181

[47] Xiang Qi and Junnan Yu. 2025. Participatory Design in Human-Computer Interaction: Cases, Characteristics, and Lessons. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI '25)*. Association for Computing Machinery, New York, NY, USA, Article 804, 26 pages. doi:10.1145/3706598.3713436

[48] Eric D. Ragan, Alex Endert, Jibonananda Sanyal, and Jian Chen. 2016. Characterizing Provenance in Visualization and Data Analysis: An Organizational Framework of Provenance Types and Purposes. 22, 1 (2016), 31–40. doi:10.1109/TVCG.2015.2467551

[49] Chris Roberts and Patsy Stark. 2008. Readiness for self-directed change in professional behaviours: factorial validation of the Self-reflection and Insight Scale. *Medical Education* 42, 11 (2008), 1054–1063. doi:10.1111/j.1365-2923.2008.03156.x arXiv:https://asmepublications.onlinelibrary.wiley.com/doi/pdf/10.1111/j.1365-2923.2008.03156.x

[50] Wendy Roldan, Ziyue Li, Xin Gao, Sarah Kay Strickler, Allison Marie Hishikawa, Jon E. Froehlich, and Jason C. Yip. 2021. Pedagogical Strategies for Reflection in Project-based HCI Education with End Users. In *Designing Interactive Systems Conference 2021* (Virtual Event, USA). Association for Computing Machinery, New York, NY, USA, 1–15. doi:10.1145/3461778.3462113

[51] Richard D. Sawyer and Joe Norris. 2013. *Duoethnography*. Oxford University Press.

[52] Donald A. Schön. 1983. *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.

[53] Phoebe Sengers, Kirsten Boehner, Shay David, and Joseph 'Jofish' Kaye. 2005. Reflective design. In *Proceedings of the 4th Decennial Conference on Critical Computing: Between Sense and Sensibility (CC '05)*. Association for Computing Machinery, New York, NY, USA, 49–58. doi:10.1145/1094562.1094569

[54] Phoebe Sengers, John McCarthy, and Paul Dourish. 2006. Reflective HCI: articulating an agenda for critical practice. In *CHI '06 Extended Abstracts on Human Factors in Computing Systems* (Montréal, Québec, Canada) *(CHI EA '06)*. Association for Computing Machinery, New York, NY, USA, 1683–1686. doi:10.1145/1125451.1125762

[55] Aneesha Singh, Martin Johannes Dechant, Dilisha Patel, Ewan Soubutts, Giulia Barbareschi, Amid Ayobi, and Nikki Newhouse. 2025. Exploring Positionality in HCI: Perspectives, Trends, and Challenges. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI '25)*. Association for Computing Machinery, New York, NY, USA, Article 451, 18 pages. doi:10.1145/3706598.3713280

[56] Evropi Stefanidi, Marit Bentvelzen, Paweł W. Woźniak, Thomas Kosch, Mikołaj P. Woźniak, Thomas Mildner, Stefan Schneegass, Heiko Müller, and Jasmin Niess. 2023. Literature Reviews in HCI: A Review of Reviews. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) *(CHI '23)*. Association for Computing Machinery, New York, NY, USA, Article 509, 24 pages. doi:10.1145/3544548.3581332

[57] Sarah Tracy. 2010. Qualitative Quality: Eight "Big-Tent" Criteria for Excellent Qualitative Research. *Qualitative Inquiry* 16 (10 2010), 837–851. doi:10.1177/1077800410383121

[58] John W. Tukey. 1977. *Exploratory Data Analysis*. Addison-Wesley.

[59] James Tyler, Marc-Olivier Boldi, and Mauro Cherubini. 2022. Contemporary self-reflective practices: A large-scale survey. *Acta Psychologica* 230 (2022), 103768. doi:10.1016/j.actpsy.2022.103768

[60] Daniel Ullrich, Eva Bischoff, and Sarah Diefenbach. 2025. The Cassandra Method: Using Dystopian Visions to Inform Responsible HCI Design and Evaluation. In *Proceedings of the 37th Australian Conference on Human-Computer Interaction (OzCHI '25)*. Association for Computing Machinery, New York, NY, USA, 505–529. doi:10.1145/3764687.3764710

[61] Raechel Dionne Walker, Brady Cruse, Aisha Cora, Kantwon Rogers, Catherine D'Ignazio, Gretchen Brion-Meisels, and Cynthia Breazeal. 2025. Archaeology of Self: Reflexivity in Data Activism to Address Systemic Injustices. In *Proceedings of the 5th ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '25)*. Association for Computing Machinery, New York, NY, USA, 28–41. doi:10.1145/3757887.3763020

[62] Jacob O. Wobbrock and Julie A. Kientz. 2016. Research Contributions in Human-Computer Interaction. *Interactions* 23, 3 (apr 2016), 38–44. doi:10.1145/2907069

[63] Tracee Vetting Wolf, Jennifer A. Rode, Jeremy Sussman, and Wendy A. Kellogg. 2006. Dispelling "design" as the black art of CHI. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Montréal, Québec, Canada) *(CHI '06)*. Association for Computing Machinery, New York, NY, USA, 521–530. doi:10.1145/1124772.1124853

[64] Runlong Ye, Oliver Huang, Patrick Yung Kang Lee, Michael Liut, Carolina Nobre, and Ha-Kyung Kong. 2026. Reflexis: Supporting Reflexivity and Rigor in Collaborative Qualitative Analysis through Design for Deliberation. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems* (Barcelona, Spain). Association for Computing Machinery. doi:10.1145/3772318.3791275

[65] Anon Ymous, Katta Spiel, Os Keyes, Rua M. Williams, Judith Good, Eva Hornecker, and Cynthia L. Bennett. 2020. "I am just terrified of my future" — Epistemic Violence in Disability Related Technology Research. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) *(CHI EA '20)*. Association for Computing Machinery, New York, NY, USA, 1–16. doi:10.1145/3334480.3381828

[66] Aaron Pengyu Zhu, Kristina Mah, and Janghee Cho. 2026. Toward Pluralizing Reflection in HCI through Daoism. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26)*. Association for Computing Machinery, New York, NY, USA, Article 1267, 21 pages. doi:10.1145/3772318.3790853

A Participant demographics

Table 5: Demographic characteristics of the participant sample. Note: While all participants reported being engaged in HCI research, their primary and secondary disciplinary affiliations may lie in adjacent or contributing fields, and therefore do not sum exclusively to HCI.

Type	Count
Gender (n=84)	Woman (45), Man (34), Non-Binary (4), Prefer to self-describe (1)
Country of affiliation	Germany (22), Switzerland (15), United States of America (12), United Kingdom (8), Finland (7), Ireland (3), Netherlands (3), Austria (2), Denmark (2), France (2), Poland (2), Canada (1), Cyprus (1), India (1), Iran (1), Italy (1), Norway (1), Spain (1)
Country of origin (n=81)	Germany (19), United States of America (9), United Kingdom (6), Switzerland (6), India (5), China (4), Russia (4), Finland (3), France (3), Austria (2), South Korea (2), Poland (2), Iran (2), Czech Republic (2), Canada (1), Italy (1), Netherlands (1), Norway (1), Greece (1), Portugal (1), Ecuador (1), Denmark (1), Spain (1), Cyprus (1), Colombia (1), Viet Nam (1)
Primary disciplinary background	Human-Computer Interaction (36), Computer Science (22), Psychology/cognitive science (10), Design (6), Business/management (1), Education (1), Information Science (1), Philosophy (1), Other (7)
Secondary disciplinary background	Human-Computer Interaction (23), Computer Science (18), Psychology/cognitive science (10), Design (7), Information Science (4), None (4), Art or Creative Practice (2), Education (2), Media Studies (2), Sociology (2), Business/management (1), Other (10)
Experience in HCI research	0-5 years (38), 6-10 years (31), 11-15 years (4), 16-20 years (1), 21-25 years (5), 26-30 years (2), more than 30 years (4)
Employment	PhD student (38), Postdoctoral researcher (13), Assistant professor (10), Full professor (6), Industry researcher (4), Industry practitioner (4), Associate professor (3), Master student (3), Researcher in NGO (3), Emeritus researcher (1)
Subfields	Understanding people – qualitative methods (33), User experience and usability (25), Design (21), Understanding people – mixed and alternative methods (18), Learning, education, and families (15), Health (13), Critical computing, sustainability, and social justice (12), Understanding people – statistical and quantitative methods (12), Interacting with devices: interaction techniques & modalities (12), Other (9), Accessibility and aging (8), Blending interaction: engineering interactive systems & tools (8), Games and play (7), Computational interaction (7), Visualisation (6), Specific application areas (4), Developing novel devices: hardware, materials, and fabrication (4), Interaction beyond the individual (4), Privacy and security (3)
Publication venues	ACM CHI (57), Other ACM conferences (e.g., CHI Play, IUI, UbiComp) (25), ACM DIS (21), Regional HCI conferences (e.g. NordiCHI, OzCHI, Indian HCI) (13), Other (13), HCI journals (IJHCI, IJHCS, CHB) (12), ACM CSCW (11), ACM TOCHI (11), Interdisciplinary or adjacent fields (e.g., education, health, STS) (11), Other ACM journals / magazines (e.g., Interactions, TACCESS) (10), Book chapters or edited volumes (8), I do not submit and/or publish research (5), ACM UIST (3), Design-focused conferences (e.g. IxDA) (2), Design journals (e.g., Design Studies, Design Issues) (1), Industry reports or white papers (1)

B Responses to: How important is reflection in each of the following research methods, based on your own experience?

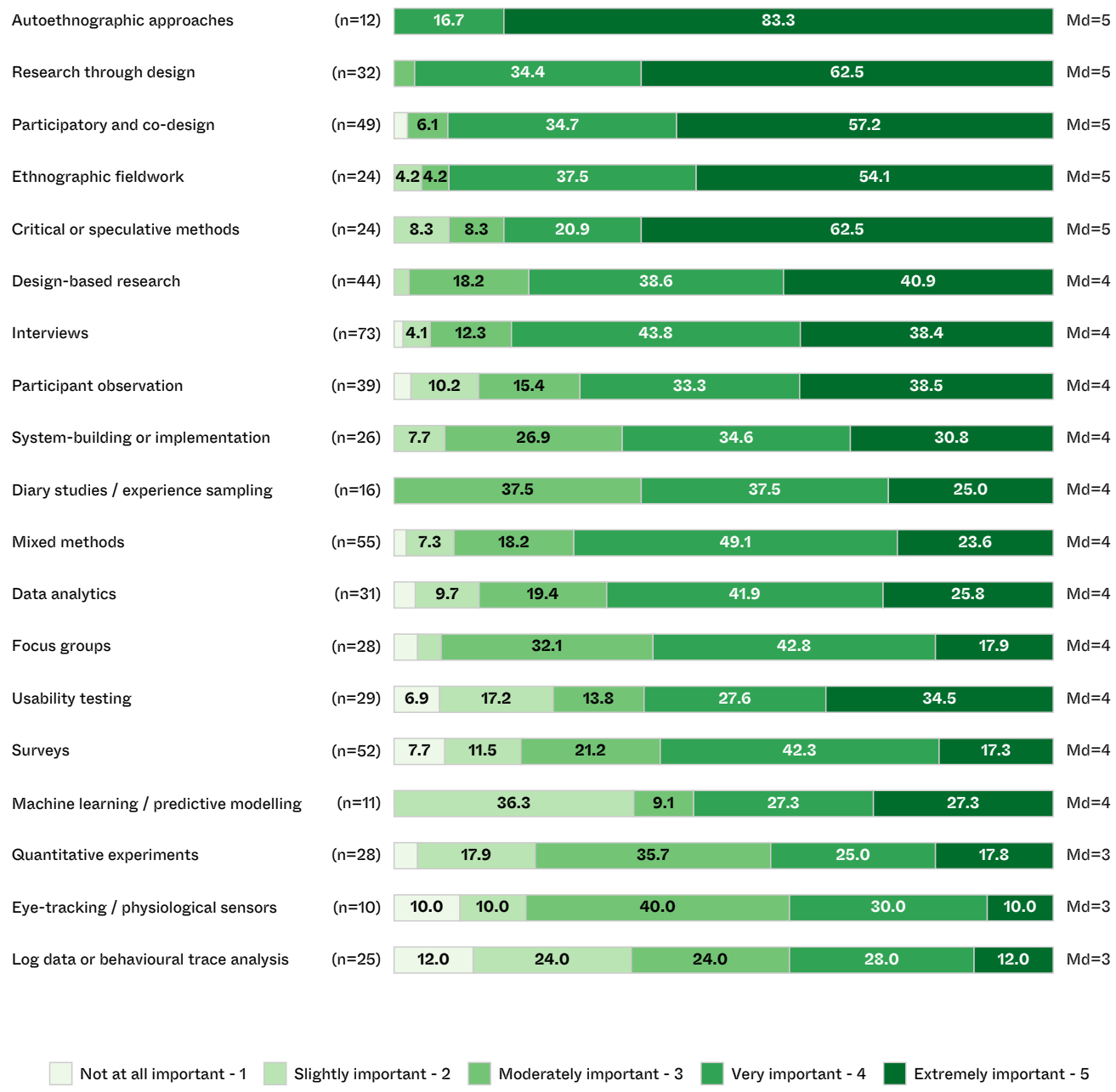


Figure 12: Distribution of responses indicating how important participants who engage in this method rate reflection in (HCI) methods in % and ordered by mean value (Likert scale: 1 = not at all important, 5 = extremely important). The median is shown on the right-hand side of each bar. Sample sizes (n) reflect the number of participants who indicated engaging in each method in a preceding multiple-choice question.

C Inferential statistics

In each model, years of HCI experience was entered as the predictor and the presence or absence of a given challenge was used as the binary outcome. These analyses were exploratory and are reported to identify potential patterns rather than to support strong causal claims.

Table 6: Exploratory logistic regression models predicting the likelihood of reporting each challenge from years of HCI experience. Reported are regression coefficients (β), odds ratios (OR), raw p-values, and Benjamini-Hochberg corrected p-values.

Challenge	β	OR	p	p_{FDR}
Emotional or cognitive overload	-0.13	0.87	.009	.097
Uncertainty about how to reflect meaningfully	-0.12	0.88	.056	.309
Lack of methodological guidance	-0.07	0.94	.112	.408
Fear of self-criticism	-0.17	0.85	.170	.408
Fear of judgement or vulnerability	-0.10	0.90	.185	.408
Lack of time	-0.02	0.98	.432	.791
Other	0.02	1.02	.505	.794
Lack of institutional or organisational support	0.01	1.01	.646	.797
Pressure to produce tangible outputs quickly	-0.01	0.99	.662	.797
Difficulty finding collaborators to reflect with	0.01	1.01	.759	.797
Feeling that reflection is not valued by peers or reviewers	-0.01	0.99	.797	.797