CHAPTER 11.

HOLISTIC ACCESS

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Abstract. *This chapter defines the concept of holistic access, a theorization of access as a multidimensional and multilevel phenomenon. It illustrates this concept by mapping the pathways two undergraduate students (a STEM and a humanities student) traveled to access an undergraduate research fellowship. The qualitative analysis of their experiences surfaces often-hidden factors that mediate access to such environments. Holistic access can help educators identify and transform barriers to access at multiple levels of the institution.*

Access can take on many meanings in conversations about education. At its base, however, access is understood through a rhetoric of opportunity: that students have the opportunity, should they choose to take it, to participate in and benefit from the varied educational experiences a university offers. This kind of access is, of course, made available to all students. But as this chapter will argue, access is not always *access*. A more honest accounting needs to recognize that access is a multidimensional and multilevel phenomenon. I identify this framing as *holistic access*.

This argument arises from an ethnographic study I conducted on a much-prized high-impact practice on my campus: undergraduate research. Undergraduate research programs sponsor curricular and co-curricular opportunities with the central goal of providing undergraduate students authentic learning opportunities via access to the scholarly activity of their professors (UERU, 1998; Wald & Harland, 2017). These experiences offer many benefits (Osborn & Karukstis, 2009), but students, particularly minoritized and first-generation students, face numerous barriers in accessing these benefits (Mahatmya et al., 2017; Pierszalowski et al., 2021; UERU, 2022). While preparation or readiness is a commonly discussed barrier, writing and literacy are not often analyzed in this scholarship. Heather Falconer's (2018, 2022) research stands as an exception.

As a WAC scholar and administrator, I wanted to learn more about how writing mediates access to UR experiences and their benefits. For this reason, I studied the experiences of students seeking access to my institution's undergraduate research fellowship program. Common to many campuses,

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fellowship programs provide students with grant funding to pursue independent projects under the guidance of a mentor. To earn a fellowship and receive funding—in other words, to gain access—students need to write a successful project proposal. In the chapter that follows, I highlight the experiences of two students from my study: Rachel, who majored in a STEM discipline. and Kamala, who majored in a humanities discipline. Both students were in their final years of undergraduate education at the time of this study. While both Rachel and Kamala wrote successful proposals and earned fellowships, their pathways toward that success reveal an array of factors that both facilitated and contested their access to the program. Drawing on their experiences, I argue that meaningfully accessing such spaces requires students: (1) to assemble a network of cultural, social, and human resources, (2) to align that network with the values and epistemologies privileged by the institution offering access, and (3) to assemble at least some of that network before they can gain access to the benefits of such learning experiences. In this way, such programs limit access to those who already have some degree of it. The combination of these understandings gives shape to what I call *holistic access*, a term I use to highlight the multidimensionality of access.

To construct this argument, I first define and illustrate the concept of *holistic access*. This concept is informed by bioecological theories of development, so I include a brief discussion of these theories. Following this definitional section, I use this holistic framing to offer strategies for addressing access at both the micro and meso levels. These strategies are intended to help writers and mentors navigate institutional headwinds that impede access by assessing and building an individual's resource network; they also aim to help educators and leaders engaged with programming at a systems level mitigate barriers that impede access. Finally, I conclude with some questions raised by this research.

HOLISTIC ACCESS: DEFINING THE CONCEPT

Holistic access emerged as a concept critical to understanding the successes and challenges of the students in my study. It was evident that these students were all highly capable, intelligent, and successful; after all, they all crafted winning proposals and earned at least one fellowship. The two students I feature in this chapter had, in fact, earned multiple fellowships at my institution and beyond it. But the pathways to that success varied. Some students, like Rachel, seemed to have tailwinds easing their way to success; others, like Kamala, faced headwinds that challenged their progress. Their stories forced me to wonder about the many students who didn't attain similar success: those who pursued the fellowship but weren't awarded one and those who were interested but never tried in the first place.

To better understand Rachel's and Kamala's pathways and the dynamics shaping them, I turned to Urie Bronfenbrenner and Pamela A. Morris' (2006) bioecological theory of human development and Dana Lynn Driscoll and Jing Zhang's (2022) adaptation of it for composition studies. David Slomp (2012) argues that bioecological approaches can help scholars consider how both individual and contextual factors influence writing development. I contend these models are also useful for research on access because the dual view they offer illuminates a network of resources available to an individual, including connections or (mis) alignments between an individual and a context, and consequently highlights factors that mediate students' access to particular learning environments. Thus, I used these theories to ask what resources were available to Rachel and Kamala and how they marshalled these resources to gain access to this fellowship program.

Bioecological theories posit that writing development involves the discovery and gradual accrual of resources over time and across contexts. The iterative employment of resources incrementally enables more complex (re) uses of resources and engenders a deepening awareness of their context of use. The main drivers of development are *processes* or *key events*, where resources are acquired and employed, and the effectiveness of a given process is shaped by the developing *person*, the *context* of development, and the *time* of development (Bronfenbrenner & Morris, 2006; Driscoll & Zhang, 2022). A bioecological lens thus prompted me to understand the mentoring interactions between Rachel or Kamala and their respective mentor (process) and the outcomes of those interactions as shaped by the individuals themselves (person), the immediate mentoring environment (context), and the adjacent or encompassing contexts that impinged upon the mentoring process (e.g., the fellowship program itself) as those elements evolve over time. So while mentoring might have been the most intentional process supporting Rachel and Kamala, these mentoring interactions were just one part of the resource networks enabling their access.

As I mapped their resource networks, I recognized Rachel and Kamala were drawing on resources across several dimensions; these included the cognitive, affective, social, and material. For Rachel, these resources mostly worked in her favor. For instance, she had a long track record operating in undergraduate research experiences stretching back to high school; this experience exposed her to the research proposal genre and the questions and methods she would employ during her fellowship project (cognitive resource). Her resource network also included the mentors she met along the way and the mentors who sponsored her fellowship project (social resource); these mentors supplied her with her research project including the data she would analyze and the technology she would use to analyze it (material resources). Rachel's mentors were also heavily involved in writing her proposal, going so far as to redraft her research questions

and methods section. And although Rachel was essentially told to apply for the fellowship by her mentors, her access was also driven by her own motivation (affective resource) to pursue a research career and graduate education, an ambition inspired in part by her parents who had both earned graduate degrees (social resource). This motivation was bolstered by her persistence and self-regulation that helped her work through difficult moments in her mentoring and research experience (affective resources). These and other elements (such as bus fare paid for by the fellowship and family and personal health issues inspiring her research interests) are all factors salient to her accessing this fellowship program.

Kamala also drew on an array of resources to gain access to this UR fellowship. Like Rachel, Kamala had abundant prior experience and had been engaged in work related to her project since high school (cognitive resource). She had written proposals as a part of that work and was, as her mentor described her, a prolific writer who could "write her way out of any hole" (cognitive resource). She also had strong motivation to pursue her project and aspirations beyond college that called her toward the justice work she was attempting in her project (affective resources). Kamala had a good mentor and project site coordinator (social resources) who encouraged her, advised her, and resourced her toward success. Her mentor had connections to the fellowship program and could provide Kamala with privileged information and materials (social/material resource), but her mentor didn't have a track-record (scholarly or otherwise) in the area Kamala pursued; in fact, her mentor didn't have much of a publication record at all. Additionally, some resources that Kamala received from her mentor (the sample proposals; a material resource) challenged Kamala's resolve (affective resource) and amplified pre-existing doubts about her belonging in the fellowship program. These doubts were merited, as I will discuss later, but her persistence and belief in the project (affective resource) were strong enough to overcome such challenges. The fellowship funding (material resource) also motivated her because it would alleviate her daily living expenses and allow her to quit her part-time jobs.

The term *holistic* emerged from such mapping and led to the three observations I shared in the introduction to this chapter. First, I recognized Rachel's and Kamala's access wasn't enabled by resources in any one dimension but by (combinations across) the whole, a network of resources that they could assemble to perform a given task or overcome a particular challenge. Rachel, for example, relied on strategies she had developed to regulate her emotions (affective resource) to navigate a rocky relationship with her first mentor, to seek help from other members of her social network, and to eventually identify a new mentor (social resource). Second, I recognized that Rachel and Kamala had assembled some or even most of their networks prior to seeking access to the

fellowship program. Rachel and Kamala, for example, had both already been working on their projects (cognitive and material resources) and had mentors to sponsor that work and connect them with the fellowship program (social resource). This observation suggests that access to this program might be unintentionally restricted to those who already have some degree of prior access. In fact, some of the students I talked with at program events chose not to apply when they learned they needed to find a mentor to sponsor their projects.

Finally, I recognized that these networks work best when the resources that comprise them align with the values and epistemologies privileged within the institutional context. Kamala's experience highlighted this key observation. While Rachel might have experienced some challenges with her mentor, her pathway toward access largely aligned with the vision of the program and the evaluators who enacted that vision. Kamala's project, however, did not align with the conceptions of what the evaluators tacitly defined as *research*, and this misalignment caused Kamala's access to be contested. In all, I began to recognize that access occurred across dimensions and at multiple levels: both at the micro-level (e.g., mentoring interactions) and at the meso- or institutional level (the relevance of the resources to the values, aim, and limitations of the program). *Holistic access* thus became the shorthand for Rachel's and Kamala's agency in assembling and employing a multidimensional resource network over time to earn their fellowship opportunities. This includes the interrelations among dimensions, the pre-existence of resources, and the alignment of resources with institutional values and material constraints.

IMPLICATIONS FOR PRACTICE

If higher education writ large wants to make its learning environments more accessible, how does the concept of *holistic access* help do that? In this section, I consider that question and organize my answer into two parts. The first takes the holistic framing and turns it toward educators working with students at the micro level; the second considers how educators working at a systems level might address access holistically. While these recommendations are built upon research on a specific UR program, I offer them with an eye toward higher education more broadly and encourage educators to think about the phenomenon of access from a holistic standpoint.

Navigating Headwinds at the Micro Level

Educators working with students at the individual or small group level should take a holistic approach to mentoring and teaching. Sometimes, challenges with

access are cognitive, and students guided by their mentors reach the limits of their knowledge and skills to complete key tasks. But a holistic approach can remind students and mentors that challenges can also be material, affective, or social and addressed by drawing on resources from one or more of those dimensions. In other words, holistic access as a concept expands the landscape upon which writing and learning problems can be discussed, identified, and resolved, allowing mentors and students to consider challenges with access from multiple vantage points.

Kamala's experience is illustrative here. When Kamala began to write the proposal for her first grant, her mentor thought she would have no problems composing it. Kamala was a proficient writer, had written several proposals previously, and was aware of the expectations of a successful proposal. Despite these considerable cognitive resources, Kamala struggled to write her fellowship proposal. To help her through this struggle, her mentor shared sample proposals that she had collected through her role as a proposal evaluator for the fellowship program. The fellowship program did not offer students sample proposals, so getting access to such materials was an advantage for Kamala.

The sample proposals, however, were a vexed resource for Kamala. As she put it, the samples helped her to better understand the form and the style of the proposal, but they also amplified Kamala's pre-existing concerns about belonging. That is, the samples reinforced her long-standing perception that *research* is "a science thing" and caused her to doubt the value of her project because the sample proposals typically described empirical, data-driven projects that were part of their mentor's research agenda. Kamala's mentor also hadn't worked on the kind of project Kamala was proposing, so she didn't have a track record to rely on like students in STEM contexts often did. This set of observations led Kamala to feel like she "didn't have anything that was really selling me as a researcher." The upshot is that Kamala's difficulty with writing her proposal originated not in her conceptual understanding of the writing task but in her affective concerns about belonging as those concerns intersected with the institutional ideologies of *research* represented in sample proposals and review practices. These headwinds caused her to wonder: does my project fit in the program? Do I belong here? Am I even a "researcher?" That doubt, more than anything, stifled her writing and contested her access.

A holistic approach to the mentoring process could have unveiled some of the complexity and eased Kamala's pathway toward success. Kamala and her mentor were able to articulate some of these challenges after Kamala's proposal was accepted when they realized they had spent considerable effort shoehorning Kamala's project into an empirical paradigm to ease her concerns about fit, shoehorning that muddled the vision of her project and complicated her proposal

writing. Viewing access holistically would have allowed for the interplay of multiple dimensions to be visible during the writing process, helping Kamala and her mentor to more accurately identify their challenges and the strengths they could leverage to address these challenges.

To this end, I offer Table 11.1 as a heuristic for problem identification across dimensions. I believe it can help make the full complexity of access more visible and help students and their mentors better understand the affordances they may leverage and the barriers they may be facing. The questions act as a starting place for mentors and students to self-assess their composing processes. Educators should adapt these questions to consider how they might better support the students they mentor and teach.

Table 11.1. A Heuristic for Addressing Access Holistically

Dimension	Elements
Cognitive	Do I understand • the subject matter sufficiently? • the conventions of this text type, including its purpose? • the expectations of the audience reading this text? • the process for developing this text (or have a plan)? • the aims of this program? Do I have experience with • this genre or audience? • aspects of this process? • this project type? • this context?
Social	Could someone in my social network • strengthen my subject matter, rhetorical, formal or process knowledge? • encourage my motivations, goals, or progress? • connect me to resources that would • strengthen my knowledge, • expand my network, • provide me with practical experience, • or help me understand my affective experiences?
Affective	• Do I find this project or subject area • meaningful to me? • motivated by a larger goal? • enabling or constraining my agency? • facilitating or contesting my sense of belonging in this environment?

Material	Do I have models of this project type? Do I have a plan for executing this project and learning in this context? Do I have time for this project? Can I find opportunities to further my interest or learning in this context? Are these funded? Do I have disruptions in my writing environment?
Institutional	What are the aims and values of the institution? How do I relate to these? What are its limitations? How might I anticipate these?

Addressing Headwinds at a Systems Level

Scaling access to high-impact practices is a considerable challenge, as noted by the UERU (2022). As with challenges at the individual level, issues with access at a systems level are not only cognitive; they can also be affective, social, and material. Thus, holistic access as a concept can help educators working at this level address issues with access by viewing them from multiple vantage points. In this section, I offer strategies that educators might consider to further enhance access to disciplinary participation through a holistic lens.

A common approach to increasing access to UR and other high-impact learning environments is to make them, their access points, and their benefits more visible (Lockett et al., 2021). This approach helps students become aware of these opportunities and understand how programs like UR fellowships can help them achieve their future goals, such as employment or graduate school. Such visibility efforts demonstrate the relevance of UR programming to students' lives, which can activate students' affective resources. While this approach might help students imagine their futures, it doesn't always help to address where students are, have come from, and how to get to where they are going. To address such a challenge, academic units could develop scaffolded programming that longitudinally prepares students for fuller participation in disciplinary activity (Carpi et al., 2017; Gaillet et al., 2022). Making the components of these longitudinal trajectories more visible would also ease access by highlighting what access involves and better defining what it means to be prepared to participate in a given learning environment. Illuminating the full constellation of capital required to participate in a UR fellowship or other authentic learning environments can facilitate access by exposing the hidden curriculum of such environments (Cooper et al., 2021) and facilitating their interrogation.

This type of work takes time and resources that aren't always available to academic units. In my work as a WAC administrator, I find that many academic units benefit from ideas that help them take the first steps toward developing these structures and addressing the challenges that shape access. In other words, to make access points more visible, academic units first need to generate access points. These access points can be course-based or more formal events and venues (e.g., celebrations of research and journals), but the students in my study often accessed their mentors and research opportunities outside of the classroom and formal celebrations. Many STEM academic units, for instance, have research groups that operate as incubators where students can meet mentors, learn about their research, and discover opportunities to contribute to ongoing projects. Such spaces also help to facilitate peer networks that normalize research, motivate pursuit of research opportunities, and foster student research efficacy, effectively (re)constituting a culture of undergraduate research. Students like Rachel were often able to take advantage of such material and social wealth that wasn't available to students like Kamala, who were often independently generating their own projects rather than contributing to the agenda of an established researcher. In other words, the epistemological practices of collaboration, replication, and aggregation common to STEM were resources themselves and provided additional tailwinds that humanities students or those in contexts favoring individuality and particularity could not leverage.

While funding a research center would be beyond the means of many academic units, some programs might allocate a small portion of funds (e.g., a grant or faculty stipend) to help academic units take the initial steps toward building resources and infrastructure. Efforts could include the curation of an archive of project types, information about methodologies, and guidance on key challenges experienced by underrepresented disciplinary areas (material resources); these are foundational activities for WAC specialists. This resource development should also include social resources, including faculty who might serve as mentors, information about their research or project agendas, and events that expose students to the idea of *research* as a core disciplinary endeavor, one that builds on an existing body of knowledge. This, in effect, begins to assemble some of the access networks that students like Rachel and Kamala relied on to secure their fellowships. An additional consideration might include identifying a person who can coordinate such efforts (social resource), via course release or other compensation, and establish connections to existing infrastructure (e.g., centers for humanities or arts; material resource), thereby amplifying or accelerating this capacity building. I say this because a plurality of the students in this study connected to research groups via academic advisors (social resource) who were charged in part with finding and connecting students to such opportunities.

As Falconer (2022) argues, establishing such spaces is only part of the challenge. How faculty engage with students in such social spaces still matters. To help students learn the social norms for engaging in authentic disciplinary activity, Falconer (2022) suggests faculty and units clarify the roles and responsibilities of undergraduates in mentoring relationships or mentored research work; faculty should also have a clear sense of their own roles and responsibilities in such mentoring relationships. Part of the resource development I described above could focus on establishing guidelines that make transparent such expectations (Cooper et al., 2021).

To take a more transformative stance, educators should also examine the ideologies that shape access to these spaces. In the UR program I studied, *research* was implicitly defined as empirical inquiry generating quantitative data and thereby tacitly defined *researchers* as those who conduct such inquiry. As I described above, this dynamic caused Kamala to doubt that she belonged in the program; she needed her mentor's encouragement and connections to the fellowship program to overcome the barrier created by this conceptualization of *research*. Similarly, the program's use of *passion* as an evaluation criterion shaped who accessed this program. Evaluators outwardly defined *passion* as excitement and justified its use to rate proposals because they believed all students could demonstrate excitement about their projects; thus, they believed *passion* would open access to the program. Inwardly, however, evaluators weren't just looking for expressions of excitement; they wanted to see a track record of project-related accomplishments. But compiling such a track record often requires access to a scarce resource: time; time to read, think, gain familiarity with an area of inquiry and methods to explore it; time to accomplish project-related tasks; time that students at my institution often used to earn money or attend to non-academic demands. In this way, *passion* ideologically shaped access in both affective (excitement) and material (a track record) ways, establishing contradictory dynamics where access might appear available to all but is only available to those with some degree of prior access or an established resource network.

Holistic access contains heuristic power to examine such ideological formations that shape access to a learning environment, and WAC specialists are well-suited to help educators identify resultant barriers and transform their influence on access. To do so, we should help educators holistically examine their practices in relation to their values using an adapted version of Table 11.1. Not all educators are ready to conduct such an examination; some haven't developed the competencies, and others are too close to their programs to see them fully. As Pamela Flash (2016) illustrates, WAC specialists are expert mediators who can create distance and illuminate practices that help educators become more aware of the dynamics shaping their learning environments. In the program I studied, access

was a value, but their evaluation practices undermined this value at times. Using a holistic lens, I was able to identify hidden facets of these evaluation practices and inform revisions to them. Such awareness enables educators to make more intentional decisions about their programs, including decisions related to access. But we need to start with a holistic lens to systematically identify and analyze the dynamics of a learning environment.

Such a research-based approach can be quite resource-intensive and unsustainable or beyond the means of many WAC specialists. A general and more scalable strategy can be to address issues of belonging and disciplinary affiliation through project representation. While Falconer (2022) demonstrates that students can interpret representation based on gender or racial identity as tokenism, I believe disciplinary and methodological representation to be different. As I described above, Kamala's doubts were reinforced by the sample proposals she reviewed; having access to materials that resembled her project type would have helped write her proposal and ease her doubts about fit. The program has funded projects from humanities and creative areas and could highlight these in program materials, signaling to students that these projects do belong. Such representation could extend to the recruitment of faculty who review projects and define what counts as *research* in the first place. Thus, WAC specialists can help educators identify project models and other educational resources to support students' access in both cognitive and affective ways.

CONCLUSION

In this chapter, I have argued that *access* is a multidimensional concept. Rachel illustrates this argument as a STEM student who was an experienced and motivated researcher but an uncertain writer who needed to persist through challenges with her mentoring relationship. To do so, she drew on a network of affective, social, material, and cognitive resources to compose her proposal and earn her grant award, thus achieving access. I have also argued that institutions expect those seeking access to have assembled at least some of their network and aligned the resources comprising it with the values and epistemologies privileged by the institution. Such an expectation restricts meaningful access to those who already have it. Kamala illustrates the headwinds ideological alignment can cause even a proficient writer as she navigated institutional ideologies that defined research in ways that contested the value of her project and amplified her doubts about belonging. Like Rachel, Kamala drew on a network of resources to overcome these doubts and achieve access. Taken together, these two arguments comprise the concept of *holistic access*: the recognition that *access* involves more than the availability of an opportunity but

the accumulation and employment of resources across dimensions and at multiple levels in institutionally recognized ways.

While I have offered some practical applications of this concept above, I believe this concept and the research it emerges from raise a few questions that future scholarship might explore further. First, how does this concept play out across different research sites and demographic categories, particularly helping to understand the experiences of new majority students (Maimon, 2023)? My original study design sought to include first-generation students and multilingual students, but I struggled to recruit students from these demographic categories. Ultimately, I was able to include two students who identified as first-generation students and two students who identified as multilingual, but this sample did not match my expectations going into the study given the student demographics of the university, one recognized as among the most diverse in the nation (Wood, 2024). Moreover, their linguistic and family identities did not seem as salient to their experiences as did their disciplinary affiliation. Is this the result of my research site or my identity as a researcher? Would a study of access within a single disciplinary environment yield findings different from my study of a cross-curricular environment?

Furthermore, my research speaks to the resources successful students relied on to achieve access, but I had originally sought to include students who had applied to the fellowship program but did not earn a grant. I was not successful in this recruitment effort either. How might the experiences of unsuccessful students enrich and deepen the understanding of access presented in this chapter? Do particular dimensions appear more salient to the experiences of success and failure? Finally, I believe attention to neurodivergence would also enrich this concept by further highlighting the multidimensional strengths students bring to academic endeavors and success. What other factors might emerge from a more concentrated study of student experiences across demographic categories?

Second, how does *holistic access* help the field of WAC reconsider the concept of *authenticity*? While above I wonder how this research might look different across research sites, I also believe the concept of holistic access described in this chapter owes much to its research site and that site's enactment of *authenticity*. Undergraduate research has been recognized as a high-impact practice and an authentic learning experience (Kuh, 2008; Wald & Harland, 2017). Peter Felton (2017) argues that such environments offer many benefits but can be challenging for students because they provide fewer explicit cues and structures that support student success than the typical classroom. For this reason, students need to practice a wide variety of competencies to find stability and achieve success in such environments. This characteristic of authentic learning environments perhaps made the dimensions and dynamics I describe in my research

more visible. Are these dimensions as salient in other authentic learning environments and more traditional learning environments? I believe that they are, but future research might document the salience of these dimensions across learning environments with higher and lower degrees of fidelity.

Finally, how might holistic access help WAC and UR scholars reimagine the concept of *authenticity* in the first place? While this concept can be defined in several ways (Bialystok, 2017; Kreber et al., 2007), WAC scholars typically define *authenticity* as the intellectual replication of the "real world." Mya Poe et al. (2010) exemplify this when they define *authentic learning* as "based on the exigency of problems to be solved in specific fields" (p. 5). Holistic access as a concept, however, reveals that replication of the intellectual work of disciplines brings not just opportunities for significant learning to university campuses but also the corresponding inequities of the "real world"—despite educators' best intentions, as Falconer (2022) writes. How does WAC as field grapple with such replication? Should *authenticity* as "real-worldness" remain the guiding frame? How might *authenticity* centered around self-determination, critical reflection, or meaningfulness help enrich our pedagogical, curricular, and scholarly pursuits?

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