Towards an Accessible Crit: Disability and Diversity in Architectural Reviews

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The United Nations and many of the world's governments define accessibility in the built environment as a human right, and U.S. architectural degree accreditation requires that accessible design be included in architectural degree curricula. However, architecture programs themselves have rarely been examined for their (in)accessibility. Looking at the architectural critique, or the crit, we note barriers for people with physical, sensory, mental, and cognitive disabilities including uncomfortable seating, long sessions with few breaks, and high-pressure extemporaneous speaking. These practices often go unquestioned, but the inaccessibility of crits is part of an overall culture of discouragement and discrimination for anyone who does not fit traditional expectations, and particularly people with disabilities.

An accessible crit consciously addresses the range of abilities and needs that may be present among both students and critics. Here we highlight four different perspectives on accessibility: historical representation of disabled people in architecture training, diversity and equity-focused practices in critiques, applying constructivist pedagogy to architectural critiques, and accessibility as critical to sustainability and resilience. Each perspective offers opportunities for transforming the traditional crit to better meet the needs of participants while furthering architectural education.

Disability is rarely included in professional discussions of diversity; for example, the American Institute of Architects (AIA) keeps statistics on members' race, ethnicity, and gender, but not disability. Meanwhile, statistics on college and graduate students show a significant portion who experience disability, including physical and sensory disabilities along with the "invisible" disabilities of mental illness, neurodiversity, and chronic illness. Since 2020 the physical and mental stresses of higher education have been even more apparent, as well as related stresses of both in-person and remote learning during a pandemic. Rather than returning to "normal" operations that present barriers,

we propose taking this moment to re-examine one of the most fundamental practices in architectural education, and using it to leverage a more equitable and productive learning environment.

INTRODUCTION

In early 2022, the four authors began a series of conversations about architectural critiques or reviews, colloquially known as crits. We represented different combinations of background and interest, including architecture, history, criticism, education, advocacy, and sustainability. Converging our interests, we were struck by both the barriers the crit created for disabled and other marginalized participants, and the possibilities for creating more accessible crits.

The crit, or formal review at the end of a studio class or program, is a shared experience for many architecture schools around the world. It is also an institutional practice rarely critiqued itself, with conditions and expectations often passed from one generation to the next without examination. The crit typically involves a gathering of students, faculty, and guest critics with oral presentations of drawings and/or models; these may take place in public or semi-public spaces within an Architecture department or school, or within the classroom of a given class. Although a common ritual, the crit rarely seems to meet the needs of student learners. Beyond our personal experiences with crits in several schools at both undergraduate and graduate levels, our casual interactions with students support that the experience is intense and often has negative aspects. Crits come with a lot of pressure and preparation, but it is often not clear what a successful crit is for either students or critics. In some cases crits have been noted as even traumatic, inciting negative emotional responses and unproductive working habits.[2]

We recognize the crit as a pedagogical practice that can pose a number of barriers, and which often includes unexamined power dimensions including those of race, gender, class, and language; we also seek to explore the specifics of disability access and ableism in the architecture classroom.[3] The power dynamics of studio teaching even intensify during crits, especially as they become more formal. We know that there are

spatial and social arrangements that affect people's physical needs, and there are social practices within school and professional culture that provide barriers to participants.

In this paper, we contribute our analyses of crit norms and possibilities for intervention from our respective standpoints. The four collaborators contribute perspectives from areas of history, diversity and equity practices, education, and sustainability. Each section outlines a framework for considering the crit, and we conclude with possibilities for future action and implications of this work.

HISTORY

The barriers built into architectural crits are embedded in historical traditions of architecture that emphasize a non-disabled body as the norm and template for spatial practice. Practices of standardization established in the nineteenth to mid-twentieth centuries took as given a healthy, mobile, all-seeing and -hearing, rationally minded subject, and addressed other bodies primarily within medicalized or institutional settings.[5] Since the mid-twentieth century, legal and cultural change has brought to light the need for accessibility in architectural form.[6] Pedagogy and curricula have followed to some extent, but there is much more to be done to make architecture school itself accessible.

A historical example of an accessible crit comes from a moment when architects collaborated with participants in the U.S. Disability Rights movement as it emerged in Berkeley, California. In the early to mid 1970s, at the University of California at Berkeley's College of Environmental Design, faculty member Raymond Lifchez engaged in several projects to connect his studios with the disabled community in the area. In collaboration with his student Mary Ann Hiserman, a wheelchair user who had worked to improve access on the University campus, Lifchez developed a teaching practice based on consultancy with area residents who had disabilities. The studio space was set up to accommodate disabled - especially wheelchair-using - collaborators. Critiques and charrettes took place in a larger space, and students construct larger, shoebox-sized components for their models that could be taken apart and passed around among visitors. As can be viewed in a documentary of the studio, the disabled residents acted as visiting experts, able to give insight into issues of access in households not covered in the bare-bones codes and guidelines of the time.[7]

Lifchez's experiment was influential locally, but short-lived. In the 1980s and 1990s, with architecture schools becoming more aware of accessibility as a professional requirement, schools including UC Berkeley incorporated code-driven access curricula into all classes rather than a special studio. A decade after he launched his program, Lifchez and disabled writer Cheryl Davis wrote in a 1986 "Open Letter to Architects" that they found most architecture schools to be "reluctant to teach a perspective of disability to their students," and instead viewed "access as a special interest or an afterthought."[8]

In recent times, even with an increased attention to diversity in the profession, disability remains somewhat sidelined. Current National Architectural Accrediting Board (NAAB) accreditation acknowledges the need for architectural training programs to to show inclusion of "different abilities" both in teaching equitable design, and in program support of faculty, students and staff. However, at the professional level, this demographic is less recognized. The American Institute of Architects (AIA) tracks diversity in race, gender, and age, but does not include disability as a category.

Barriers to disabled people pursuing architecture can be found in everything from physical spaces to the overall culture and expectations of architecture schools. As the historian David Gissen points out, even if architecture schools' buildings are accessible by ADA standards, often key spaces of gathering and crits - such as lecture halls and pin-up spaces - are not. Unwritten expectations of architecture school, such as visiting historical sites of significance, likewise might be inaccessible.[9] Karen Braitmayer, founder and principal of Studio Pacifica in Seattle, who is a wheelchair user with mobility and hearing disabilities, likewise notes that the exclusion of people with disabilities to the profession are primarily based in prejudice and structural barriers. "Academic and professional stereotyping" such as the insistence that architecture students be able to draw by hand, Braitmayer writes, are "real roadblock for students with disabilities considering architecture as a career."[10]

Crit practices such as those described by my collaborators below offer ways to engage students in more inclusive approaches to training. These also allow for flexibility so that a rigid understanding of the body and mind of the architect does not deter students with disabilities from pursuing this profession. From the spaces used for crits, to overall program policies addressing student needs and goals, the architectural crit can shape a more accessible profession.

DIVERSITY AND EQUITY IN CRITS

The demographics of architecture programs have changed significantly in the past decades. Thirty years ago, my undergraduate architecture class at The Ohio State University was 10% women and 5% Black, Indigenous and People of Color (BIPOC) students. The population at the same school today is 50% women and 10% BIPOC. Yet the curriculum and crit process has not changed significantly to reflect the different needs or requests of changing demographics and underrepresented students. The crit process requires much energy and planning, from students in production and instructor in organization. It can be a highly emotional experience for students for many reasons. During the crit, the student's vulnerability is accentuated by the typical physical arrangement where a student stands separated from seated critics and classmates. Another

Figure 1. View of student Tyler Simon Johnson using a digital screen to present large color images of an architecture project. Knowlton School credit.

is the importance of the studio in the curriculum and student grades. Because the crit process emphasizes a culmination of learning objectives for the project, and perhaps term, the stakes are high for one important moment in the term for students that often weighs heavily towards their final grade. Therefore, critical changes working towards a more accessible and equitable pedagogical experience should be implemented to benefit all students.

First for consideration is the role of the crit in the curriculum. Does the program have a statement and policies regarding the role of the crit in the pedagogical process that is shared publicly? If not, develop and share the information with both faculty and students to create a collective understanding of the goals of the crit in the curriculum. This should include identifying resources available for crits including digital screens/projectors (see figure 1), space, time and funds for equitable reviews. One key role by leadership is to incorporate and support a broader diversity of critics. This includes identifying a broad range of critics, inclusive of disability, gender, race, ethnicity, ranks of professors and professionals, that not only represent the demographics of the students but bring diverse perspectives beyond the student body. During the pandemic, many reviews were online, incorporating a wider range of modes of reviews

and critics beyond geographical constraints. Programs should continually update its pool of potential guest critics with an emphasis on diversity. Program budgets should compensate, even minimally, critics for their travel, time and efforts, especially those of marginalized identities. This larger representation of critics expands the review of student projects to include different perspectives, benefitting a larger demographic of students.

Individual studio sections or instructors can identify goals for the crit with students at the beginning of each studio term, including thoughtful consideration and options of student production required for crits. At the beginning of the term, students should write their goals for the studio and crits, before expanding into a collaborative discussion with the instructor and the studio as a whole. Include ideal or desired critics for reviews for discussion, which can be organized with time allowed for planning. Discussion of output for reviews should be transparent for financial and time considerations and alternatives including a combination of digital and physical models and drawing options. In addition to reducing waste, allowing students to present digitally can have significant savings instead of printing expensive color prints. Access to digital means for presentation should be facilitated by the instructor. After the crit, instructors should foster a reflection and discussion
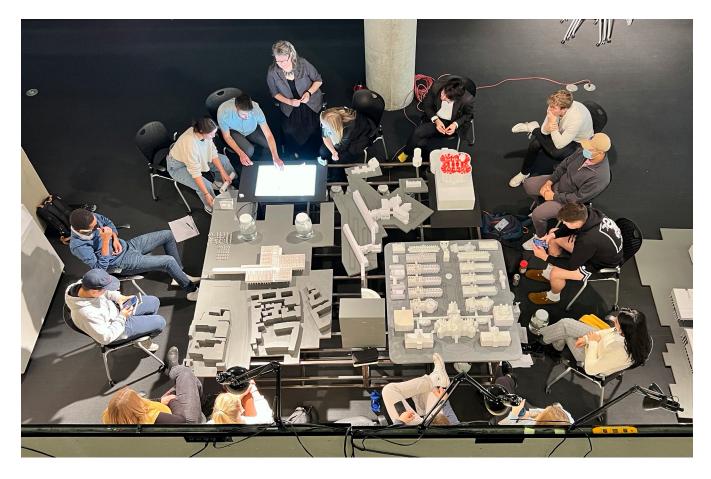
Figure 2. A view from above of students presenting around a shared table with a light table displaying drawings. Knowlton School credit.

of the crit with students to process how the student and crit achieved the pedagogical goals. Once objectives are defined, identify how they are supported by faculty and administration to facilitate the process.

The collaborative discussion should consider a variety of formats for crits beyond the traditional model. A 2017-2018 Technological University (TU) Dublin Bolton Street pilot program with third year architecture students explored alternative crit models including round table reviews, closed juries with written feedback, online open reviews, and "red dot" reviews.[11] The pilot identified the benefits of clarity of feedback, stress reduction and productivity, peer learning and changing the power imbalance. Once shared goals are agreed upon, the students can prioritize their efforts with not only the pedagogical but also crit goals in consideration. Closer to the crit, review the goals for progress and final production efforts. Share the goals with the critics, so they can address objectives defined by the students.

Physical organization at the crit is important to dismantle power structures. The traditional hierarchical model of a standing separated from the seated critics and classmates needs careful consideration and change. Demonstrated in figure 2, shared seating around a table with critics distributed equally amongst the class can facilitate a larger collaborative discussion that includes the students. Options for displaying drawings can range from horizontal to vertical, physical, and digital. Drawings can be displayed and shared around the table. Position moveable pin up boards around the configuration of the table and display drawings vertically or a combination of vertical and horizontal on the table. Use screens for students to project color images that are more expensive to print. Orthographic projections may be more effective if they are printed and positioned as static content during the crit. Position models on or adjacent to the table. Flexible seating more easily allows students to move their bodies as needed. Structured breaks should be accommodated because crits often occupy long spans of time. These alternative modes of presentation and physical organizations are being implemented, and students are noticing significant differences and more satisfaction in the results of crit.

EDUCATION

Whether or not participants in a crit are aware of the pedagogy that describes their practices, viewing and reviewing this ritual through these terms can help make crits more effective. Educational theory can not only help instructors understand the potential effects of their leadership but can

also help plan for courses of action that might better meet the goals of students.

Looking at crits from a student-centered perspective, students come to a studio with a number of goals. These goals might include elements of academic success, such as a grade or feeling of accomplishment, or advancement of design skills as students work toward entering the profession. In a crit, students practice presenting their work and receiving constructive feedback. Such criticism would help them make better design choices in the future. Students also learn from the work of their peers as they view and discuss a variety of design solutions to the same prompt. The goals for a crit also include social aspects- making a good showing in front of their peers and critics, honoring a communal project milestone, and supporting their community. Overall, perhaps a feeling of success can be the most elusive within the hyper-critical setting of a crit.

In order to meet such goals, participants in a crit have numerous essentials that should be supported. Biological and physiological needs and safety, "belongingness," and esteem needs require fulfillment in addition to cognitive and educational needs. Addressing the physiological with practices such as a "pens down" time, offering reminders and opportunities for sustenance, hydration, and rest, and leading by example benefits all participants. Conferences, check-ins, written feedback, and desk crits support the psyche. To create a supportive classroom culture for both students and faculty, the attributes of both physical space and social practice can be employed, often in tandem, for students to have more successful crits.[12]

In education, scholars distinguish between two different models of education. Most formal crits follow a traditional or teach-centered delivery, wherein the instructors or critics provide information which learners passively take in. This method relies on the individual abilities of the instructor to convey information and the learner to receive it rather than the group cooperating to make sure that everyone's needs are met including educational progress. However, constructivist theory posits an alternative means of education, that learners construct knowledge cooperatively.[13] Applying a constructivist theory to crits would promote the goals of participants and allow for their needs to be better met.

Constructivist education can revitalize crits when employed through a number of techniques. Throughout a course, an instructor could review a student's goals and how they are being met. Using nurturing criticism might embody all the same provoking ideas but framed in a more positive constructive means. A studio could also create a list of needs, similar to those mentioned previously, that should be addressed in the crits. Rather than placing the burden of criticism upon the shoulder of one student at a time, students can be critiqued in pairs or dyads.[14] Another option would be to create a democratic covenant or group agreement at the beginning of a studio course that is

referred to throughout the semester to check on how needs are being addressed.[15] This provides an opportunity to adjust physical space or social practices to better meet the needs of the collective group. Post-crit processing with the instructor provides the opportunity to reflect on the project and presentation, allowing students time to better understand and incorporate the experience into their personal schema. Being present for this process also invites the instructor into these thought processes and opportunity to guide healthy ways to grow from the experience. Of the options mentioned previously tested by Flynn et al, the Round Table Review, Written Feedback, and Red-Dot Review offered the most benefits.[16] In general, these techniques are proactive, involve students, and purposefully design the experience of a crit in order to increase the educational value of the experience.

Skeptics of a constructivist approach to crits might argue that the discomfort of a crit is necessary for learning. However, provocation and comfort need to be balanced for optimal educational gains. Lev Vygotsky's Zone of Proximal Development proposes that rapid advancement occurs in the gap between what a learner can do by themselves and what they can achieve with assistance.[17] Instructors and critics benefit students by providing this assistance without pushing beyond a student's capabilities. With such student-centered, constructivist approaches, crits can meet a larger number of student needs and become more accessible.

SUSTAINABILITY
Sustainability uses terms like "regenerative design" and "creating a livable future" to mean envisioning a future that has begun to heal the planet and the people living on this planet, a future that is equitable and prosperous, and one that is resilient and whole. Building on work done by Disability Studies scholars— notably Aimi Hamraie,[18] Max Liboiron,[19] DJ Savarese,[20] and Alice Wong[21]—access is a fundamental part of creating that livable future.

The ADA (Americans with Disabilities Act) Standards for Accessible Design provide the bare minimum for access to public accommodations and facilities intended for the general public. The ADA Standards do not create access for all, meaning in all the ways a person may be disabled by the built environment (e.g. flickering light that causes migraines or seizures for some). Therefore, merely complying with ADA Standards, just like complying with the building code, is not using the best practices taught to architecture students.

When architects and designers create non-inclusive spaces, they are perpetuating the narrative of who does not belong and are continuing to build for only the select few into the foreseeable future. When that bias is applied to architecture schools, the myth that architecture education is also only for the select few is perpetuated, and innovation in architecture becomes limited to the worldview of only those privileged

Figure 3. Torsten and Wanja Söderberg Hall at Röhsska Museet. Johnna Keller.

enough to be included. However, inclusive practices, especially in and around discussions of architecture and design like a crit space, allow everyone to be equally engaged in the process and provide future architects and designers a better understanding of how spaces can be used for different bodies and dis/abilties.

We might borrow some terminology and concepts from sustainability, namely "energy" and "regenerative/restorative," when thinking about architecture crits. In their current iteration, crits tend to consume energy resources from students, leaving them feeling depleted and sometimes confused or upset, instead of excited and hopeful or even restored. Students with disabilities may have already expended a significant amount of energy to get to the crit if they have also navigated the time-consuming process of securing academic accommodations. Within the crit itself, everything from the power dynamic to poor indoor environmental factors can create additional stressors on students. These stressors lead to poor outcomes during a critical moment within the course, sometimes making up the bulk of the student's grade. What if, just as sustainability has shifted toward regenerative or restorative design, crit spaces could make students feel restored and inspired, rather than depleted?

Architecture schools could consider adopting many indoor environmental factors, rooted in sustainable design and industry best practices, in order to foster more inclusive and restorative crit spaces.[22] For example, holding crits in spaces that are larger and more flexible allows for more experimentation with seating arrangements, including having more space for maneuverability for a wheelchair user or for a person needing to lie on the floor, so that all students can be more engaged in the discussion. Upgrading lighting fixtures to ones that are adjustable by each user for brightness, positioning, or color temperature supports students who are blind or have low vision. Offering acoustically enhanced or private group spaces for crits allows for clearer communication for deaf or hard of hearing students and also supports students who may find it more difficult to present their work in spaces open to public critique.

We might also look for inspiration in spaces designed for reflection and discussion. Figure 3 shows Torsten and Wanja Söderberg hall, a newly-created space in the Röhsska Museum in Gothenburg, Sweden. Its purpose is to invite users to simply pause and think about, or discuss, art and design. Its seating is flexible, and there is space for a wheelchair user to maneuver and be part of the conversation. There are multiple levels and configurations of lighting, specific to the tasks in the space. It is

a quiet space with books, magazines, and a computer, inviting the user to explore in ways beyond either discussion or quiet reflection. A wall graphic on the far end suggests ways this space may be used:

> Welcome! The Torsten and Wanja Söderberg hall is a space to read, discuss and immerse oneself in design, crafts, fashion and architecture. Here you will find international periodicals, a digital archive, and the opportunity to read more about the museum's collections. This is even a meeting place for conversation, events, and presentations of research projects and much more.

Torsten and Wanja Söderberg hall offers an opportunity not only to provide for the many modes of learning about and discussing art and design, it also creates a space that can be used by different bodies with dis/abilties. Creating an inclusive space, like this one, in architecture education means everyone can be included in the conversation: everyone has a voice at the table to offer feedback and, therefore, guide future design and innovation. These voices and points of view are needed–to create spaces that work better for all occupants, to help tackle challenges like climate change, and most importantly, to create a livable future where everyone is included.

FUTURE WORK

Reviewing the crit seems to be a topic of recent interest. Flynn has been working on the topic from Dublin, Ireland since at least 2005,[23] most recently expanding the commentary to include three scholars from the United States among the twenty international contributors from the 2022 book, Rethinking the Crit.[24] Martin-Thomsen et al, a group of educators from Pratt Institute in the United States, also published a crucial perspective on the crit's power dynamics in relation to race and gender in 2021.[25] Part of our work is then to expand awareness in our communities and advocate for implementation at the schools we are associated with.

As researchers, educators, and practitioners with many competing interests, we are interested to see where our collaboration will lead next. We see potential in applying and reviewing alternative modes for crits. Quantifying the negative experiences with crits and assessing the types of response via student surveys would provide support for experimenting with different types of crit and a baseline from which scholars could assess the improvement offered by alternative models. Surveying critics who have participated in crits would supply data from a different perspective. Another possible direction for scholarly research is to analyze how architecture schools plan to use crits as seen in their institutional statements. Alternatively, a visual analysis of documentation of crits could assess how crits are currently performed. Such opportunities are almost limitless but require evaluation in terms of the usefulness for identifying the most productive lines of research.

FINAL WORDS

It is a timely moment to re-examine the topic of more equitable crits. The pandemic and social justice movement questioned pedagogy, which shifted because of available resources and different modes of instruction. As instruction returns to in-person teaching, the existing patterns and routines in architecture education are reenacted, and disabled and chronically ill populations are often left out of consideration. It is a key moment to ask how the crit can be a more effective pedagogical tool for students in their development as architects.

ENDNOTES

1. All authors contributed equally.

2. Although the prevalence and types of negative experience with crits does not appear to have been quantitatively studied, the assumption that crits are generally problematic is assumed by a number of scholars on the subject, e.g. Flynn et al, : New Pedagogies in Design Education (London: Routledge, 2022).

3. T. Camille Martin-Thomsen et al., "The Scholarship of Critique and Power," Teaching & Learning Inquiry 9, no. 1 (2021): 279–94.

4. Tanya Titchkosky, The Question of Access: Disability, Space, Meaning (Toronto ; University of Toronto Press, 2011); Margaret Price, Mad at School: Rhetorics of Mental Disability and Academic Life (Ann Arbor, Mich.: University of Michigan Press, 2011).

5. Aimi Hamraie, Building Access: Universal Design and the Politics of Disability (Minneapolis: Univ Of Minnesota Press, 2017), ; Lance Hosey, "Hidden Lines: Gender, Race, and the Body in Graphic Standards," Journal of Architectural Education 55, no. 2 (November 2001): 101–12.

6. Bess Williamson, Accessible America: A History of Disability and Design (NYU Press, 2019).

7. A House for Someone Unlike Me, dir. Bruce Bassett (Adaptive Environments Center, 1984). The video is available online at https://revolution.berkeley.edu/house-someone-unlike/

8. Raymond Lifchez, Rethinking Architecture: Design Students and Physically Disabled People (Berkeley: University of California Press, 1987).

9. David Gissen, "Why Are There so Few Disabled Architects and Architecture Students?," The Architect's Newspaper (blog), June 15, 2018, https://www.archpaper.com/2018/06/disability-education-of-architects/.

10. Karen Braitmayer, "Yes, People with Disabilities as Architects," Architect, July 8, 2019, https://www.architectmagazine.com/practice/karen-braitmayer-yes-people-with-disabilities-as-architects_o. Accessed October 28, 2022.

11. Patrick Flynn et al., "Rethinking the Crit, A New Pedagogy in Architectural Education" in 2019 ACSA/EAAE Teachers Conference Proceeding (2019): 25-28. https://www.acsa-arch.org/proceedings/Teachers%20Proceedings/ACSA.Teach.2019/ACSA.Teach.2019.5.pdf

12. For a listing of physical space and social practice needs, see https://docs.google.com/document/d/134KhEgR6RcSWeWkl7nzetkqgCkKu9RKIKsh5zI_h1pM/edit?usp=sharing

13. Ernst von von Glaserfeld, "A Constructivist Approach to Teaching," Constructivism in Education, eds. Leslie P. Steffe and Jerry Gale, (Hillsdale, NJ: Lawrence Erlbaum, 1995): 3-15.

14. See https://docs.google.com/document/d/1XE410ZjElyhLUd_xi-JevHUDF3IWRDZLsLUbffpty0TU/edit?usp=sharing for a full explanation and rationale for dyadic/paired critiques.

15. Covenants/group agreements are described in detail at https://docs.google.com/document/d/1SYQ92xAOAuefUu_hRo1Rqv4Pp29TYljwJlRAXGoHMGU/edit?usp=sharing

16. Flynn et al. Rethinking the Crit.

17. Lev Vygotsky, Mind in Society: The Development of Higher Psychological Processes (Cambridge, MA: Harvard University Press,1978).

18. e.g. Hamraie, Aimi. Building Access: Universal Design and the Politics of Disability. Minneapolis, MN: University of Minnesota Press, 2017.

19. e.g. Liboiron, Max. "There's No Such Thing as 'We.'" Discard Studies, October 12, 2020

20. e.g. Savarese, DJ. "Disrupting the Garden Walls." Logic, Issue 15 / Beacons, December 25, 2021.

21.   e.g. Wong, Alice. "Editorial." *Orion Magazine,* Winter 2021, December 8, 2021.

22.   Additional work on how indoor environmental factors intersect with inclusive design can be found here: https://sustainingaccess.com/sds-2014/johnna/

23.   Patrick Flynn, "Critting the Crit in the Education of Architects: From Bauhaus to Bolton Street," *ARROW@TU Dublin*, (2005).

24.   Flynn et al. *Rethinking the Crit*.

25.   Martin-Thomsen et al., "The Scholarship of Critique and Power."