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# MANY PATHS: CURIOSITY AS TRANSFORMATIVE PROCESS (Paper)

## **Abstract**

Curiosity is seen as an integral part of information-seeking, including the power to transform, innovate, and synthesize, as well as the power to disrupt. While there is consensus that curiosity is vital to learning, innovation, and transformative change, scientists have yet to agree on definitions or categories of curiosity, and little is known about how best to engage learners' curiosity in academic libraries. This paper presents interview findings with 41 transfer students. Students reflected on their experiences with libraries and on moments when they felt intensely curious or passionate about learning. Findings indicate that students' curiosity ignites through ideas, hands-on learning, interpersonal, and lived experiences. Implications follow for library workers to consider how curiosity is framed within their institutions and intentionally cultivate learners' curiosity.

## **1. Introduction**

We need disruptive, out-of-the-box curiosity more than ever to tackle the “wicked problems” of our age (Rittel and Webber 1973), and to question and reimagine the status quo. As Zurn and Shankar write, curiosity is “one of the most important political tools we have at our disposal” (Zurn & Shanker 2020, xii). These facets of curiosity are valuable for both learners and educators to be cognizant of.

While curiosity is widely associated with innovation, change, and transformation, surprisingly little work has explored curiosity and academic libraries. In particular, it is not well understood how learners' curiosity is sparked and what academic libraries or library workers may do to support curiosity. There is a need to understand, in students' own words, how they describe curiosity as it relates to curricular or extracurricular learning. It is worth noting that similar constructs such as interest or serendipity have been more widely studied, yet the relationships among these constructs have not yet been mapped.

## **2. Curious Tensions in the Literature**

Curiosity is seen as an integral part of information-seeking, with qualities both lauded and derided, including the power to transform, innovate, and synthesize, as well as the power to disrupt (Bassett 2020; Zurn and Shankar 2020). Scientists have yet to agree on definitions or categories of curiosity, though interdisciplinary teams are re-examining this paradoxical and elusive construct. Curiosity operates through novelty, pleasure, and the reward centers of our brains as well as through doubt and the “need to know” (Kang et al. 2009, 966; Kidd and Hayden 2015, 458; Loewenstein 1994). The literature suggests that learning is much more potent when learners are deeply engaged, and when learning is relevant, relational, and builds on prior

experiences (Keller 2010; Knowles, Holton, and Swanson 1998; Packer and Goicoechea 2000). Yet, curiosity is too often seen as “nice-to-have” in an educational context instead of the catalytic, vital force that sparks and motivates us to engage in inquiry, sometimes obsessively, sometimes in a brief flight of fancy.

Part of the reason that curiosity is understudied may be that curiosity also has a disruptive quality that is not always welcomed by institutions (including universities) and governments invested in perpetuating a status quo (hooks 1994, 60; Zurn 2020, 236). While the specific term ‘curiosity’ is rarely used, a critical, questioning stance is core to liberatory, decolonial, justice-oriented, and transformative pedagogies that conceive of a curiosity that is “collective and it is communal” (Freire 1993; hooks 1994; Mezirow 2003; Zurn 2020, 239). Specific pedagogical approaches (e.g., culturally sustaining pedagogy, inclusive pedagogy, humanizing pedagogy) and methods (e.g., problem-based learning, inquiry learning, active learning) are all in some ways concerned with these questions. Together, these frameworks are thought to lead towards equity-minded education that values lived experiences and many ways of knowing. These connections align with the conference theme of Northern Relations. And yet, these methods may be viewed as threatening by the academy or by campus administrators.

Within libraries, public libraries and museums embrace the language of curiosity and exploration through makerspaces and exploratory exhibits, as can be seen in practitioner publications (Barker and Holden 2017; Chant 2017; Siu Hong Yu 2017; Willingham 2014). Such engagement may align with neoliberal or capitalistic branding of ‘curiosity’ (Grande 2015, 7; Shankar 2020, 107). In academic contexts, Rempel and Deitering note how college assignments often dis-incentive the very messiness and uncertainty that accompany curiosity and suggest methods for librarians to counteract these forces (Rempel and Deitering 2017). These observations are supported by Bowler’s interviews with ten adolescents on their curiosity “process,” finding students often had to reign in their interest in order to meet the scope and deadlines for an assignment (Bowler 2010). Mabee and Fancher identify affective obstacles and life stressors as barriers to curiosity among community college students, yet still report examples of students’ curiosity in spite of these obstacles (Mabee and Fancher 2020). These important early studies point to the opportunity for LIS professionals to hear directly from students about curiosity and what learning experiences spark or ignite it. There are also opportunities for library workers to critically consider how curiosity is framed within libraries, and the ways in which this construct reflects socio-political forces.

### **3. Methods**

The goal of this study was to better understand how college students experience curiosity. The researchers designed an interview study using a critical constructivist epistemology within an asset-based framework (Kincheloe 2005; Moll, Amanti, and Gonzalez 2005; Rios-Aguilar and Kiyama 2018; Steinberg 2014). Transfer students were selected as an understudied group. Transfer students bring prior experience from their past institutions, including with curiosity, and with libraries, yielding valuable insights and comparisons that mono-institution students may not have. Transfer students also represent an equity pathway to higher education for communities long denied access to higher education (“Advancing Diversity and Inclusion in Higher Education” 2016, 22).

The research team interviewed 41 transfer students at a large public university in the Western United States asking about a time they felt intensely curious or passionate about learning something. Interviews lasted between twenty minutes and an hour and followed a semi-structured interview protocol. Approximately half of the students (n=20) interviewed were in their first semester since transferring to the institution, and half (n=21) had completed a semester or more at their new institution. This blend allowed the research team to learn more about students' early transition experiences as well as those of students with longer time to adjust to their new institution. The 41 participants represented twelve different science majors, twelve different social science majors, and six different humanities and arts majors with a range of discipline-specific learning practices. Just over half of participants identified as female (n=24). Participants held multiple identities as first generation college students (n=13), as having been born outside of the United States (n=6), as first generation Americans (n=4), as students with disabilities (n=5), and as veterans (n=1). Students interviewed identified as White (n=25), Hispanic/Latino (n=6), multiracial (n=4), Asian (n=3), and Middle Eastern (n=1), with two students who chose not to disclose their race. Interviews were transcribed and coded using Dedoose qualitative software. All observations from the first round of coding were then sorted using axial coding into thematic groupings, under two primary categories: curiosity and affect, and how curiosity is kindled (Saldaña 2016).

#### **4. Findings and Discussion**

Students described their curiosity and passion for learning through four clusters that build on Rempel and Deitering's work (2017): curiosity generated by ideas, curiosity through hands-on learning, interpersonal or social curiosity, and curiosity as an affective process. These four clusters may overlap or students may synthesize their learning across these clusters.

Curiosity was sparked by ideas and topics students found intrinsically interesting, such as wildfires, young adult literature, or the history of space exploration. Some students expressed passion for learning through synthesizing ideas related to questions of deep personal or societal impact, such as a student who shared, "I had to write a paper about the nature of human beings, like, if we were good or evil. And I was taking another class that was anthropology... So I kind of mixed those two together and it was really interesting to just do all the research and come up with ideas ... it's been my favorite paper." These experiences suggest that students are engaged as they acquire new language, new understandings, or deepen their conceptual schema for a topic. For example, a student taking an African American history course visually mapped newspaper articles about racism that helped them understand patterns geographically and teleologically, as the student described, "seeing it all come together was pretty cool." The novelty of a research library collection sparked curiosity for other students, such as one who exclaimed, "I'm so in awe of how many resources there are here ... so many books in here to choose to research from..."

Many students described hands-on learning experiences, such as a visit to special collections, volunteering in a diabetes clinic, or working on a marketing internship as sparking their curiosity. A student described hands-on learning and a desire to "give back" through an organization called Engineers in Action, sharing proudly, "I worked for a month and a half in Bolivia last summer, and I'm travelling to Eswatini this coming summer to partner with the community there on a pedestrian bridge constructions." Another sub-set of students were particularly drawn to learning experiences that involved cross-cultural or interpersonal curiosity, including experiences that

helped them explore their values. A student described wanting to deepen her knowledge of American Sign Language as a future speech, language and hearing therapist, explaining, “I wanna be able to incorporate that into my profession in the future. There's a huge, huge clash with deaf people in SLP's because their main thought is ‘they're going to teach me oral, oral, oral, like nothing about my sign and my deaf culture.’ And I want to completely switch that around in my personal practice.” While not fully articulated, this student is naming an injustice against the Deaf community perpetuated in the SLP profession, as well as aspiring to a justice-based stance that centers this community. A sense of alienation as a transfer student on a new campus became a launching pad into a critical exploration of technology and sociality, “ I think tech companies are not doing nearly enough to kind of combat that and I did a lot of research on my own about that.” This student is questioning a deeper narrative of technology as a panacea through their own experience, coursework, and research. These experiences may be precursors to what Zurn describes as “political” or “resistant” curiosity (Zurn 2020).

Students frequently used affective language to talk about their experiences, primarily using positive emotion words such as “excited,” “interesting,” “cool,” and “fun.” These language choices demonstrate how closely curiosity is tied to affective experiences. Students who felt they had a talent for a particular subject were also motivated to engage more deeply, as were students whose life experiences were connected to the material they were learning. A professor's enthusiasm for a topic could spark interest for students, as one shared, “[h]e has a lot of examples, and he explained how bees communicate... He keeps things very simple, very relatable. And well organized. All his thoughts are so well connected, and he transitions into the next thing. And I'm just all about it.” While other students found their experience dampened by stress or by faculty who did not express enthusiasm or draw personal connections to the material. Finally, several students described distress over choosing a major, feeling that it restricted their explorations, an example of curiosity being subjected to institutional norms. As Shankar describes, some students did experience pressure to “curtail” their curiosity to serve “what they ought to want to learn” (Shankar 2020, 107), such as an international student completing a Shakespeare class to fulfill requirements, who, when asked whether they enjoyed the class, replied, “Not really. I'm really not good at literature ... but I have to take it, so I have no choice. I'm trying my best to do... yeah.”

## **5. Implications: Messages and Pathways**

Educators, including academic library workers, have opportunities to reconsider how curiosity is framed, as well as the curiosity pathways students described. While the term ‘curiosity’ may evoke specific connotations of what and how inquiry should look, we have opportunities to consider what messages about curiosity are inherent in our institutions and libraries. Educators and library workers can recognize and support multiple pathways for learners' curiosity. These pathways include curiosity through ideas, hands-on learning, interpersonal connections, and lived experiences.

Library workers can talk with students about curiosity (Rempel & Deitering 2017), it's many types, and how it connects with stages of the research process, such as Kuhlthau's model that includes affective components (Kuhlthau 2004). On the epistemic side, research indicates that use of questions to stimulate curiosity in an engineering course led not only to promoting students' curiosity, but also “creativity, critical thinking, and teamwork” and both divergent and

convergent thinking (LeBlanc, Nepal, and Mowry 2017). Arjun Shankar argues libraries can help people synthesize their own questions with related phenomena (Chant 2017). Teaching faculty are also valuable potential partners for instruction librarians in working together to support students' curiosity (LeBlanc, Nepal, and Mowry 2017, 5). Additional ways to stimulate curiosity around ideas are to evoke both the complexity and coherence of a topic to stimulate interest, and to share "bad science" examples that illustrate mistakes and failures (Silvia 2008, 59; Yu 2017, 4-6). Exhibits and speaker series in the library may also contribute to epistemic curiosity within library spaces. Finally, introducing students to the joy of browsing in the stacks may be another way to integrate with students' curiosity in ideas, especially when framed around "research as inquiry" or "searching as strategic exploration" (Association of College and Research Libraries 2016).

Primary sources and hands-on experiences with research materials have long been ways of increasing the relevance for students, and these materials connect to experiential curiosity, though library workers and course instructors may not always frame them as part of the curiosity journey. The author has offered a behind-the-scenes library tour for transfer students and enjoyed students' excitement at seeing the specialized equipment in the preservation room. These experiences can also be entry points for students to see the library as a source of curiosity.

Social curiosity may be sparked by conversation and narrative, such as the Living Library events the author and colleagues have co-sponsored for two years, where campus community members share stories, engaging deeply around differences. Rempel and Deitering aimed to engage social curiosity by embedding stories about their campus researchers within a campus map to generate students' interest in the lives and work of local scholars as a starting point for research (Rempel & Deitering 2017). A "Science Cafe" model is another method for dialogue among experts and non-experts that connects people with ideas (Yu 2017, 5). At a larger scale, social curiosity may also lead to the "resistant curiosity" questions Perry Zurn suggests when applied to societal problems (Zurn 2020, 230). There are many opportunities for experimenting with curiosity in library spaces and partnerships.

Together with our learners, library workers can question, complicate, and expand messages about curiosity. To focus these efforts on the problems most needing our curiosity, Zurn and colleagues propose asking "What is going on? What do we need? What better future can we imagine?" (Zurn 2020, 230).

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