

Book Review: How Humans Learn: The Science and Stories Behind Effective College Teaching by Joshua R. Eyer (2018)

Nitra Eastby, Virginia Tech

One might assume that the task of uncovering “the science” of how humans learn would be left to psychologists or neuroscientists, not to a humanities professor. Such an assumption did not deter Joshua Eyer, whose doctorate is in Medieval Studies, from exploring the topic in his 2018 publication *How Humans Learn: The Science and Stories behind Effective College Teaching*. Rather, the combination of Eyer’s relative distance from these disciplines and his devotion to growing as an educator make Eyer an ideal guide through the available research on learning, as he is able to exercise the freedom of taking an interdisciplinary approach in order to reveal wisdom that can be applied to instruction in all fields of study. With a focus on instructors in higher education, Eyer invites his audience to consider the methods and motivations for learning about the world around us which are present from infancy to adulthood. He then urges readers to question which instructional practices support these core principles of learning, and which detract from the ultimate mission of higher education.

Eyer, who is now the Director of Faculty Development at the University of Mississippi, shows his strengths as an educator from the start of *How Humans Learn*. Throughout the introduction, Eyer is authentic, admitting his misconceptions (“I thought these answers would be easy to find,” p. 4) and his vulnerabilities (“I have one small disclaimer: I am not a scientist,” p. 14). But more importantly, he demonstrates that he is capable of contributing to the conversation by clearly articulating that his approach to the material as an educator allows him to identify patterns in the literature and make strong connections to pedagogy and praxis. He also models how he lets his misconceptions and vulnerabilities fuel his curiosity and methodology rather than serve as barriers to embarking on a project. Through this earnestness and honesty, Eyer allows his audience to get excited to explore how humans learn without the fear that he will be condescending or alienating on his journey through the literature.

After the introduction, each subsequent chapter is devoted to one of five “deep-seated commonalities” (p.7) amongst humans that drive our learning processes: curiosity, sociality, emotion, authenticity, and failure. Eyer cites literature from multiple disciplines to define each of these terms, showcasing the complexity of studying human nature. He then balances a mix of personal anecdotes, studied phenomena, emerging theories, and classroom examples to give the reader multiple entry points into understanding how each commonality plays a role in how we learn. Each chapter tends to start broadly about the importance of these learning principles to our evolu-

tion as a species and then methodically sets the focus on what that means for modern education and how to incorporate it into instruction.

Take the first chapter, “Curiosity”, as an example. Eyer begins with a story about his infant daughter enthusiastically investigating objects that adults may consider mundane. He then asks questions that most students and educators eventually ask themselves: What happens to our curiosity between childhood and adulthood? Why do so many college-aged students find learning to be boring or stressful? As promised in the introduction, Eyer uses research from psychologists, evolutionary biologists, and neuroscientists to suggest that our curiosity never disappears, it is just not encouraged (and in some environments, it is actively discouraged). Through the literature, Eyer shows that curiosity is often suppressed as students face the inevitable demands of life and absorb a fear of failing that is instilled through equating learning and success with mastery of neatly-defined, standardized skill sets. After moving the reader through identifying the source of the problem, Eyer launches into defining and illustrating pedagogical approaches that help to combat anxiety around learning in the classroom and to create opportunities where curiosity is welcomed and celebrated. Then, he suggests models and methods for improving classroom presence, utilizing intentional course design, and guiding class discussions. Eyer follows up with real-world examples of instructors applying these strategies in their own classrooms, such as mathematician Donald Saari, who engages students’ curiosity and creativity through posing a challenge (e.g., what is the volume of this roll of toilet paper?) and then guides students through an exploration of their own ideas about how to answer the question before he provides any textbook formulas or strategies to accomplish the task. This allows students to construct their own understanding of a problem and its potential solutions without the pressure of rote memorization.

Over the next four chapters, Eyer applies the same formula: ease the reader into the concept, explore how it is investigated in various disciplines, and then connect the concept to suggested strategies for improving college-level instruction. In Chapter 2, “Sociality”, Eyer highlights that while the evolutionary origins and mechanisms of our social nature may be contested, there is ample evidence that humans learn best by learning with and from others. And while Western educational systems often portray learning as an individual pursuit, Eyer illustrates ways to integrate storytelling, collaboration, and even play into the classroom. In Chapter 3, “Emotion”, Eyer wades through the research on defining what emotions

are and how they impact how humans process information. He then argues that educators cannot decouple emotions from the learning experience, and offers insight on how to: build positive emotions around learning; show care about the emotional needs of students; and address negative emotions that inhibit learning. In the subsequent chapter, “Authenticity”, Eyler asks, “What does it mean to be real?” (p. 153) and cautions educators against artificial tasks or projects that don’t align with how practitioners actually do work in the field. This dovetails seamlessly with his final chapter on failure, which, as Eyler states, “tend[s] to make up quite a bit of the terrain on the road to discovery,” (p. 172). He walks the reader through the origins of the fear of failure that is widespread amongst college students, explains how this fear inhibits learning, and provides tangible ways to address this.

For each of these chapters, perhaps the greatest features of *How Humans Learn* are the special content boxes that Eyler implements throughout each chapter. After introducing a concept or methodology to bring into (or avoid bringing into) an instructional environment, Eyler provides bite-sized, practical, and impactful strategies for the readers to incorporate the concept into their own classrooms. Returning to the example of the chapter on curiosity, Eyler’s first piece of wisdom to the reader is: Don’t be scary! Eyler then offers the simple strategy of taking time to open up to a class about our own journeys in academia or even our hobbies and interests outside of our professions in order to build trust with students. Another example comes from the “Sociality” chapter where Eyler recommends that instead of a teacher just dictating standards for behavior in the class, that the instructor “talk to your students about their own expectations for a classroom community” and then revisit it periodically (p. 90) so they can co-create the expectations and increase their sense of belonging in the classroom. Not only do these sections make this a book that can more readily be used as a tool for instructors, but it also compels the audience to actively confront their own teaching methods and imagine themselves in the classroom.

Ultimately, *How Humans Learn* seeks to uncover our intrinsic motivations for learning and then use that knowledge to empower students in higher education. As Eyler demonstrates throughout his book, true learning requires that instructors invite the whole person into the classroom, including each student’s interests, fears, strengths, and weaknesses. There are few professions more prepared than librarianship to reinforce the development of independent learners and to support connected learning, making this book pertinent to both instructors and non-instruction librarians alike.

How this Book Applies to Instruction Librarians

For instruction librarians, there are occasionally approaches from this book that many may not be able to employ. For instance, Eyler advocates that his readers find opportunities to promote learning through failure by incorporating more low-stakes or no-stakes assignments. Oftentimes, instruction librarians only have a single session with a class and have no input on student evaluation, so they may not find suggestions on how to weight grades particularly helpful. However, the vast majority of the pedagogical approaches outlined in this book are highly relevant for all instructors, including those who need to maximize impact in fewer sessions. It is no small task to ignite curiosity in students and to help them build their confidence in their research processes in a 50-minute session. The deep-dives into strategies for building effective collaboration, fostering open discussion, and reducing anxiety around failure are useful for any instructor who doesn’t want to waste their short window of opportunity.

Even as a collections-focused librarian with few instructional duties, this book has had a great impact on how I see my work. I don’t regularly find myself planning a lesson or leading students through a practice of inquiry, so advice on assignment building or classroom presence may seem loosely tangential to my job. However, learning does not start and stop in the classroom, and knowing more about how instructors engage students and foster a learning environment is imperative if libraries want to build collections that can support learning goals. *How Humans Learn* has inspired me to consider how we make resources available, how we display information, and what other tools and resources are needed to appeal to and build on the core principles of learning that Eyler outlines. It is on all of us to create an environment where learning is encouraged, not just those in the classroom.

Conclusion

How Humans Learn should not just be widely circulated amongst teaching faculty, but should be read by anyone in higher education, including students. Without shaming or belittling, Eyler walks readers through the ways many of us may have experienced an education that failed us in big or small ways, and he has helped me to unpack where my own anxieties around learning developed. With this knowledge in hand, Eyler empowers us to work to improve our methods of education for future generations of learners. *How Humans Learn* will plant seeds in the brains of everyone who reads it, and I am hopeful that the impact of this work will be widely felt.