Informing Practice and Extending the Tradition of LXD: Introducing the Special Issue

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Tracing Our Journey with Learning Experience Design

By all accounts, the phenemonon of Learning Experience Design (LXD) continues to evolve and gain prominence. Our journey with LXD, as the editors of this special issue, has spanned several years leading up to this publication. In 2017, we (along with Andrew Tawfik) started our initial conversations about LXD and wrote a book chapter entitled "User Experience Design" (Earnshaw et al., 2018) for Rick West's first edition of the *Foundations of instructional design and technology* book (West, 2018). The chapter was well received, and thus, our conversations about how user experience methods could be applied to the field of instructional design and technology continued. Shortly thereafter at an Association for Educational Communications and Technology (AECT) convention, we were introduced to Isa Jahnke, who at the time was the Director of the Information Experience Lab at the University of Missouri. She joined our ongoing conversations about LXD, which led to an edited book in 2020 entitled *Learner and user experience design research: An introduction for the field of learning design & technology* (Schmidt et al., 2020). Since then, we have had a number of presentations at AECT conventions and have been invited guest speakers and discussants in other spaces. In 2021 at the AECT convention, we presented our theory on LXD for the AECT Research and Theory Division Theory Competition. We received the People's Choice Award for our theory. Our chapter on "Theoretical Considerations of Learning Experience Design" (Jahnke et al., 2022) is published in Heather Leary, Spencer P. Greenhalgh, K. Bret Staudt Willet, and Moon-Heum Cho's (2022) edited book on *Theories to influence the future of learning design and technology: 2021 AECT RTD theory spotlight competition.* Building on our continuous engagement with LXD, in 2023, the theme of the AECT Summer Research

Symposium was centered around LXD, and an edited book based on the papers presented at the symposium will be published in 2024.

As we pursued these achievements, we were fortunate to encounter passionate scholars deeply interested in this topic. Among them were Tammy Huang and Noah Glaser, both of who studied under Matthew Schmidt and have since transitioned into faculty roles. Their work embodies the LXD tradition, and given their dedication and expertise, we felt it was only fitting to invite them to join us as editors for this special issue. In addition to this special issue, we will also be participating with them at this year's AECT convention, where we will be engaging in a range of concurrent sessions and panel discussions on LXD and related research. Their contributions have been invaluable in shaping the narrative and direction of our collective endeavor. Reflecting on this journey, it is evident that the realm of LXD research is not only vibrant but also highly productive. The continuous exploration, discussions, and contributions from scholars and practitioners alike have solidified LXD's position as a pivotal area of study.

The evolving landscape of LXD has brought forth numerous terminologies and methodologies, sparking debates and discussions among professionals. Over the past several years, we have had many discussions with colleagues about LXD and how we can better define LXD. Is it just a new term for instructional design? What makes the distinction between LXD and instructional design? For us, LXD goes beyond the traditional viewpoint of instructional design, as evidenced by its definition: “a human-centric, theoretically-grounded, and socio-culturally sensitive approach to learning design, intended to propel learners towards identified learning goals, and informed by UXD methods” (Schmidt & Huang, 2022, p. 151). Furthermore, LXD is transdiscplinary. It not only draws from fields such as psychology, educational technology, instructional design, and human-computer interaction, but also represents a synergistic confluence of these disparate traditions. LXD's emphasis on human-computer interaction is critical. However, LXD not only takes into account how learners interact with technology, but also the sociocultural and pedagogical dimensions of these interactions and how this influences learning (Jahnke et al., 2020). We need to see how the learner is interacting with their peers and the instructor. We must also see how the learner is assessed. Hence, drawing from a pure user experience (UX) or usability perspective is insufficient because learning goals are not included. UX and HCI are largely technocentric, that is, the emphasis is primarily on the technology and how a user interacts with the technology. However, with LXD, learning is central. Indeed, as Gray and Boling (2023) point out in this special issue, without learning, LXD fails to differentiate itself in any recognizable way from UX. The holistic, transdisciplinary approach of LXD places emphasis on technology, human interaction, and the learning process itself. As such, LXD offers exciting possibilities for moving beyond the traditional focus areas of effectiveness, efficiency, and appeal, and into areas of design that traditionally have received less attention. In reflecting upon the contributions to this special issue, we are invigorated by the diversity and depth of ideas and perspectives presented. The innovative thinking and provocative discourses showcased here suggest that LXD research and practice is injecting renewed vitality into the field of learning design while at the same time inspiring us to question our assumptions and push our boundaries. We look forward to continuing these conversations.

Inside the Special Issue

From the start of planning this special issue, we aimed to gather a wide range of views on LXD. Our efforts attracted 10 articles, each showing different ways LXD methods are used, how various models fit in, and what experts think about LXD. In addition, we wanted to invite prominent authors to contribute to the special issue. By invitation, Colin Gray, Elizabeth Boling, Jason McDonald, and Charles Reigeluth have graciously contributed their viewpoints on LXD. For these invited authors, we hosted a mini-symposium where they could discuss their rough drafts and ideas with other invited authors. This led to 3 additional articles, bringing the total to 13 articles. Below, each of these articles is briefly described. It is our hope that readers of this special issue will be inspired by the discussions that are taking place within and across this corpus of literature.

In the article "Do-It-Yourself, Low-Cost Pop-Up Usability Labs for Learning Experience Designers," authors Matthew Schmidt and Yvonne Earnshaw build upon their original book chapter on user experience design (Earnshaw et al., 2017) to offer practical guidance, especially beneficial for newcomers, on how to set-up a usability lab for evaluating educational and learning technologies. They provide no-cost and low-cost solutions for setting up a portable usabilty lab, including hardware and software configurations as well as options for integrating various LXD methodologies. They also offer insights on how to use the portable usability lab to conduct usability evaluations. The authors' pragmatic approach helps demystify the process of usability testing, making it more accessible and achievable for educators and designers alike, regardless of budget constraints.

In her research study, "Designing and Evaluating a 3D Virtual World Game for English Language Learning: A Learning Experience Design Approach," Rui (Tammy) Huang describes the process and outcomes of an iterative, three-phase approach to enhance the usability of a 3D virtual world game created using Mozilla Hubs and Mozilla Spoke. She uses several key LXD methodologies, including empathy interviews, cognitive walkthroughs, heuristic evaluation, and task-based think-aloud usability testing, to ensure a more comprehensive analysis. Huang's application of LXD methodologies not only underscores the importance of a learner-centered design approach but also offers a valuable blueprint for practitioners aiming to optimize learning experiences within immersive learning environments.

Ji Hyun Yu describes the role of the learning experience designer in "Learning Experience Design as Collective Praxis: Two Design Cases From Higher Education." She argues that critical pedagogy, which takes into account power structures, can be used by learning experience designers to create a more equitable learning experience. This includes using LXD methodologies in the design and development of online courses. Yu's exploration into the intersection of critical pedagogy and LXD offers a fresh perspective, emphasizing the potential for designers to foster more inclusive and just learning environments.

In "Learning LXD Through LXD: Applying Conceição and Howles' Framework for Designing Online Learning Experiences," Joseph Rene Corbeil and Maria Elena Corbeil present a design case focused on the redesign of a fully online graduate course based on LXD principles. They also describe how LXD is taught using a cognitive apprenticeship approach where students could practice applying the LXD principles by developing their own courses. This

approach exemplifies the essence of "learning by doing." By immersing students in a real-world application of LXD principles, they illuminate the transformative power of hands-on experience.

Katarzyna Sims, Maximilian Wegener, Lisa Nichols, and Merceditas Villanueva present their design case on how they applied LXD in "Using Learning Experience Design (LXD) to Promote Decreasing Stigma in Creating a Video Series about Syringe Services Programs (SSP)." They emphasize how LXD focuses on the learner's sociocultural background and describe their process of designing animated videos. They call for more research on LXD to reduce stigma in the medical field, particularly for marginalized populations. The work of this author team underscores the profound potential of LXD in addressing sensitive and critical issues in healthcare. By thoughtfully considering sociocultural nuances of their target audience, these authors have demonstrated how LXD can be a powerful tool in fostering understanding and empathy.

In her research study, "Going Through the Motions? Asynchronous Online Course Discussions Considered Within a Learner Experience Design Framework," Andrea Gregg uses a combination of interpretive qualitative methods and user experience methodologies to analyze interviews and discussion board posts and to conduct think aloud observations. The findings of the study suggest that applying an LXD framework to analyze discussion board posts can be beneficial and suggests a new model for asynchronous online course discussions and LXD. Asynchronous online discussion boards represent an area in need of ehnancement, and Gregg's innovative approach to integrating LXD within this context underscores the versatility of the LXD framework for creating more enriching and meaningful experiences.

Rebecca Quintana and Chris Quintana present a design case on a four-course MOOC series on LXD in "Situating MOOC Learners Within the Field of Learning Experience Design Through Immersion in Authentic Contexts." They apply interactive XR-enhanced videos to walk learners through a simulated apprenticeship using the Development of Instructional Designers Apprenticeship (DIDA) Model. The Quintanas' fusion of technology and pedagogy underscores LXD's potential to redefine the boundaries of digital learning.

In "Theory-Driven and Practice Oriented Perspectives on Instructional Design and Learning Experience Design," Victoria Abramenka-Lachheb provides three examples from her experience as a learning designer in higher education. She discusses the similarities and differences between LXD and instructional design and suggests that LXD methodologies are something that more advanced designers will be integrating into their work. This acknowledgement of the field gravitating toward LXD methodologies underscores LXD's growing significance and its potential to shape the future of holistic and learner-centered design approaches.

In "Exploring the Relationship Between Usability and Cognitive Load in Data Science Education," Andrew Tawfik, Linda Payne, Andrew Olney, and Heather Ketter investigate the correlation between LXD, specifically using the System Usability Scale instrument, and factors of cognitive load and conceptual knowledge. Their study provides precedent for subsequent investigations into the multifaceted relationship between LXD, cognitive load, and effective learning.

Peter Honebein and Charles Reigeluth introduce a process model for designers to use in "Designing Rational and Emotional Learning Experiences via the Learning Experience Canvas (LXC)." They describe the seven steps of the LXC process which are used during a brainstorming session with designers to focus on design elements associated with both rationality and emotion. Through this emphasis on the symbiotic relationship between rationality and emotion, the authors' model not only underscores the interconnected and holistic nature of effective LXD, but also presents it in an easily understandable framework, ensuring that even those new to the field can grasp and apply these principles effectively.

In their paper "Learning Experience Design an an Orienting Guide for Practice: Insights From Designing for Expertise," Jason McDonald and Tyler Westerberg delve into the relationship between LXD and ID. They articulate that LXD is not a mere reiteration of traditional ID or HCI/UX methodologies, but instead, that it offers a fresh perspective by emphasizing distinct learning affordances, questioning the blanket applicability of established ID techniques, and broadening the scope of desired outcomes in design. To illustrate this, the authors showcase a simulation that immerses students in an ethical quandary, aiming to stir emotional dissonance and guide novices toward achieving comprehensive expertise. This work underscores the evolving landscape of LXD while highlighting its transformative power in shaping learning experiences.

The paper "Learning Experience Design in the Light of Design Knowledge and Philosophy" by Colin M. Gray and Elizabeth Boling discusses the emerging field of LXD in relation to ID. The authors argue that LXD is not a separate field but an alternate philosophy of design that focuses on learner- and experientially-focused characteristics. Through exploration of the concepts of design knowledge and design philosophy, and how these concepts impact the current and future state of ID and LXD practice, the authors not only chart the evolving contours of the LXD landscape but also underscore its potential to redefine the future of the learning design and technology field.

In "What's the Difference Between Learning Experience Design and Instructional Design?" Charles Reigeluth and Yunjo An locate their work at the intersection of LXD and ID, suggesting that while these two phenomena have historically used different skills and methods, there is room for integration. This work challenges the traditional boundaries of LXD and ID, advocating for a harmonious blend of both fields. By emphasizing the symbiotic relationship between the artistic and scientific facets of design, they present a compelling vision for the future of instructional design. Their work serves as a beacon, guiding practitioners toward a more integrated and holistic approach, yet at the same time ensuring that the essence of both LXD and ID remains preserved.

Closing Remarks

In curating this special issue, our aspiration was to create a platform that not only showcases the depth and breadth of LXD but also sparks meaningful dialogue and exploration within our field. The outstanding contributions from the included authors have been instrumental in achieving this vision. The diverse perspectives and rigorous research presented in this special issue both enrich our understanding of LXD and highlight its growing significance and potential in shaping the future of learning design. However, these

conversations are far from concluded. Indeed, the discussions and debates surrounding LXD, as presented in this special issue, underscore its evolving nature and the importance of continued exploration and refinement. Such dialogues will be critical for continued growth and maturation of the field, ensuring that LXD remains relevant, useful, and responsive to ongoing permutations.

Looking ahead, it remains clear that the landscape of LXD research and practice remains largely unmapped. We therefore encourage scholars and practitioners to delve deeper, to challenge existing paradigms, and to innovate with bold new approaches. Whether this be clarifying our understanding of just what LXD might be, exploring novel or less common design approaches, or delving into more theoretical territory, the future of LXD is rife with possibilities.

In closing, we extend our heartfelt gratitude to the authors in this special issue. Your passion and commitment to advancing the field of LXD are what made this special issue possible. We look forward to witnessing the continued growth and evolution of LXD with you in the years to come.

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