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TOWARDS A POST-DIGITAL CONSTRUCTIVIST PEDAGOGY FOR LIBRARY AND INFORMATION SCIENCE EDUCATION

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Abstract

Library and Information Science (LIS) education is increasingly challenged by the complexity of contemporary information environments, where digital technologies are deeply embedded in social, institutional, and knowledge practices. While LIS curricula have expanded to include digital tools and systems, pedagogical approaches often remain largely content-driven and technically oriented. This creates a disconnect between academic preparation and the demands of post-digital information work. This paper argues that LIS education must move beyond tool-based instruction towards a more integrated and reflective pedagogical approach. Drawing on post-digital theory and constructivist learning principles, the paper proposes the Post-Digital Constructivist LIS Pedagogy Model (PDCLP Model) as a conceptual framework for rethinking teaching and learning in LIS. The model is structured around five interconnected dimensions: active knowledge construction, hybrid learning environments, collaborative knowledge practices, critical information literacy, and reflective professional development. Together, these dimensions reposition LIS education as an active, socially embedded, and critically engaged process. The paper contributes to LIS scholarship by offering a theoretically grounded and practice-oriented framework that aligns pedagogical design with the realities of contemporary information systems and user contexts. It concludes by outlining implications for curriculum development, teaching practice, and institutional reform. The study highlights the need for LIS education to shift from a focus on technical competence to the development of critical, adaptive, and reflective information professionals capable of operating in complex post-digital environments.

Keywords: *LIS education; post-digital pedagogy; constructivist learning; information literacy; LIS curriculum; hybrid learning environments*

1.1 Introduction

Contemporary information environments are no longer defined by the presence of digital technologies alone. They are shaped by complex, interconnected systems in which digital infrastructures are fully embedded in everyday knowledge practices. This condition according to Knox (2019) has been described as post-digital, where the distinction between digital and non-digital becomes increasingly irrelevant, and attention shifts to how information systems structure knowledge, access, and participation, as discussed also by Jandrić et

al. (2018).

Within Library and Information Science (LIS), this shift raises a critical concern. Although LIS education has expanded its engagement with digital tools and platforms, the underlying pedagogical approaches have not evolved at the same pace. Teaching remains largely organized around system use, procedural knowledge, and content delivery. As a result, digital integration often appears more additive than transformative, a concern echoed in recent LIS education discussions, including Saunders (2020) and Juliani (2021), who question whether current approaches sufficiently prepare students for complex information environments. This situation creates a deeper tension within LIS education. There is a growing risk that programmes are producing graduates who are technically competent but insufficiently equipped to critically interpret, question, and respond to the systems they use. In other words, there is a shift toward training "tool operators" rather than reflective and critical information professionals."

This paper argues that such a trajectory is unsustainable in a post-digital context. What is required is not simply more technology in the classroom, but a rethinking of how learning it is structured. This paper contributes by proposing a Post-Digital Constructivist LIS Pedagogy Model, which repositions LIS education as an active, critical, and practice-oriented process. The model integrates constructivist learning principles with post-digital realities to support deeper engagement with information systems, users, and professional practice.

2.1 Literature Review

2.2 Conceptual Foundations

The post-digital perspective provides an important starting point for understanding contemporary information environments. Rather than focusing on technological innovation, it draws attention to the ways in which digital systems are embedded within social, institutional, and epistemological structures. As Jandrić et al. (2018) explain, the post-digital condition reflects a stage where digital technologies are normalized and inseparable from everyday practices, while Knox (2019) emphasizes that this shift requires renewed attention to how knowledge is shaped through these systems. More recent discussions, such as Fawns (2022), further highlight that post-digital education must move beyond tools to consider context, practice, and human engagement.

For LIS education, this perspective expands the scope of what it means to be information-literate or professionally competent. Information work is no longer limited to organizing and retrieving resources; it involves navigating algorithmic systems, addressing misinformation, and understanding the socio-technical conditions under which knowledge is produced and accessed.

Constructivist learning theory complements this perspective by offering a framework for how such complex learning can take place. Learning is understood as an active process in which individuals construct meaning through experience, interaction, and reflection. Fosnot and Perry (2005) argue that knowledge emerges through engagement with real-world problems, while Vygotsky (1978) highlights the importance of social interaction and guided learning. Contemporary educational research continues to affirm the value of constructivist approaches in developing higher-order thinking and applied competencies, as noted by Darling-Hammond et al. (2020).The convergence of post-digital thinking and constructivist pedagogy is therefore not incidental but necessary. Both perspectives emphasize context, participation, and critical engagement. Together, they provide a coherent foundation for rethinking LIS education as a process that goes beyond technical training to include interpretive,

collaborative, and reflective dimensions of learning.

2.3 Critique of Current LIS Pedagogy

Despite ongoing efforts to modernize LIS education, significant gaps remain between current pedagogical practices and the realities of contemporary information work. One of the most persistent issues is the overemphasis on technical and procedural competence at the expense of critical and analytical engagement. While students are trained to operate information systems, they are not always encouraged to question how these systems shape access to knowledge or reflect underlying biases. Hicks and Lloyd (2016) argue that information literacy education often fails to fully engage with the social and critical dimensions of information use, while Saunders (2020) highlights the need for LIS curricula to move beyond functional skills toward more reflective and evaluative competencies. More recent work by Tewell (2022) further reinforces the concern that critical approaches to information literacy remain unevenly integrated across LIS programmes.

This raises an important question: has the integration of digital technologies in Library and Information Science (LIS) education been largely superficial? As Ocholla and Bothma (2021) observed, while many institutions have adopted digital tools and online learning platforms, the underlying pedagogy has often remained largely unchanged. Lectures, standardized assessments, and content-heavy curricula continue to dominate instructional practice, thereby limiting opportunities for active learning, collaboration, and critical engagement. Ocholla (2021) further argued that the educational value of digital technologies depends not merely on their availability but on how effectively they are integrated into learner-centred pedagogical practices.

Another limitation lies in the persistence of passive learning models. According to Kuhlthau, Maniotes, and Caspari (2022), students are frequently positioned as recipients of knowledge rather than active participants in its construction. However, professional LIS practice requires graduates who can interpret complex information needs, engage meaningfully with diverse user communities, and make informed decisions within uncertain and rapidly evolving information environments. Saunders (2023) maintained that traditional teacher-centred approaches do not adequately prepare students for these professional realities because they place insufficient emphasis on inquiry, reflection, and collaborative problem-solving.

There is also a continuing disconnect between theory and practice. IFLA (2022) noted that although students are introduced to key LIS concepts and professional standards, they are not always provided with sufficient opportunities to apply these concepts in authentic or simulated professional environments. Similarly, Ocholla and Bothma (2021) argued that limited experiential learning weakens students' ability to translate theoretical knowledge into professional competence, thereby widening the gap between classroom learning and workplace expectations.

Taken together, these issues suggest that LIS education has embraced digital technologies without undergoing a corresponding pedagogical transformation. As UNESCO (2023) emphasized, digital transformation in education should involve changes in teaching philosophies and learning processes rather than the simple adoption of technological tools. Likewise, OECD (2023) argued that educational systems must redesign pedagogical approaches to cultivate critical thinking, creativity, adaptability, and lifelong learning. The result is a system that risks producing graduates who are operationally skilled but critically underprepared.

Addressing this imbalance therefore requires a shift toward a more integrated pedagogical approach one that aligns learning processes with the complexity, uncertainty, and socially embedded nature of post-digital information environments.

3.1 The Post-Digital Constructivist LIS Pedagogy Model

In response to the limitations identified in current LIS pedagogy, this paper proposes the Post-Digital Constructivist LIS Pedagogy Model (PDCLP Model) as a conceptual framework for rethinking teaching and learning in Library and Information Science education. The model is grounded in the recognition that contemporary information environments are hybrid, socially embedded, and shaped by complex technological systems. As Jandrić et al. (2018) and Knox (2019) argue, post-digital conditions require a shift from viewing technologies as tools to understanding them as part of broader knowledge systems. At the same time, constructivist theory emphasizes that meaningful learning occurs through active engagement, interaction, and reflection, as articulated by Fosnot and Perry (2005) and Vygotsky (1978). This paper contributes by proposing the PDCLP Model as an integrated pedagogical system that aligns LIS education with these realities. The model is not a set of isolated principles but a dynamic and interconnected framework, where each component reinforces the others to support deeper learning and professional readiness. At its core, the PDCLP Model is structured around five mutually reinforcing dimensions.

Active Knowledge Construction

Learning within the PDCLP Model is centered on the active construction of knowledge. Students are not positioned as passive recipients of information but as participants who engage with real-world LIS problems. Fosnot and Perry (2005) emphasize that knowledge develops through experience and interpretation, a position further supported by Darling-Hammond et al. (2020), who highlight the importance of inquiry-based learning in developing higher-order thinking skills. In practice, this requires a shift toward problem-based learning, case analysis, and project-driven tasks that allow students to explore how information is created, organized, and used across different contexts.

Hybrid Post-Digital Learning Environments

The PDCLP Model recognizes that learning occurs across integrated physical and digital spaces. Knox (2019) and Fawns (2022) describe post-digital environments as inherently hybrid, where boundaries between online and offline interaction are increasingly blurred. In LIS education, this translates into the use of interconnected learning spaces, including libraries, digital repositories, databases, and collaborative platforms. These environments allow students to engage with information systems in ways that reflect real professional practice, fostering contextual understanding rather than abstract knowledge.

Collaborative Knowledge Practices

Learning is inherently social, and the PDCLP Model places strong emphasis on collaboration. Vygotsky (1978) cited in Tewell (2022) argues that knowledge is constructed through interaction, while contemporary LIS scholarship highlights the importance of community engagement and participatory learning. Within this framework, students engage in group inquiry, peer learning, and community-based projects. These activities mirror the collaborative nature of LIS practice, where professionals work with colleagues, users, and institutions to address information needs.

Critical Information Literacy

A defining feature of the PDCLP

Model is its emphasis on critical information literacy. In post-digital environments, information is shaped by algorithms, platforms, and socio-political influences. Saunders (2020) and Hicks emphasize that LIS education must move beyond functional skills to include critical evaluation of information systems. Students are therefore encouraged to examine issues such as misinformation, algorithmic bias, data ethics, and information inequality. This dimension ensures that graduates are not only skilled users of information systems but also critical and ethical practitioners.

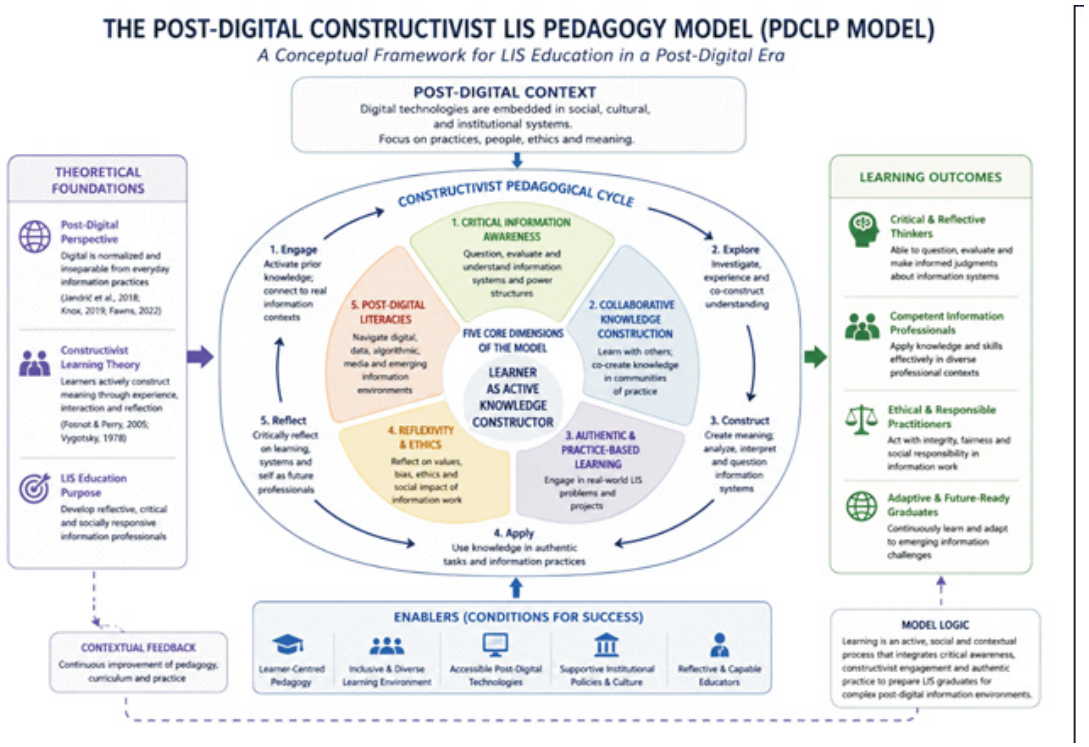
Reflective Practice and Professional Formation

The final dimension of the PDCLP Model is reflective practice. Learning is strengthened when students can connect experience with understanding and evaluate their own development. Fosnot and Perry (2005) highlight the role of reflection in knowledge construction, while Schön's (1983) work on reflective practice cited in Darling-Hammond et al., (2020) underscores its importance in professional learning. In LIS education, reflective activities such as journals, portfolios, and experiential reports support the development of professional identity and adaptability. This prepares students for continuous learning in evolving information environments.

System Logic of the Model

The PDCLP Model operates as an integrated system rather than a linear sequence. Active knowledge construction is supported by hybrid learning environments, which provide the context for collaborative engagement. Collaboration, in turn, deepens critical information literacy, while reflective practice allows students to internalize and refine their learning.

This interconnected structure ensures that learning is continuous, dynamic, and aligned with real-world LIS practice.



3.2 Implications for LIS Education

The PDCLP Model challenges several long-standing assumptions within LIS education. One of the most significant is the belief that technical competence alone is sufficient for professional readiness. While digital skills remain important, they do not adequately prepare students for the interpretive, ethical, and collaborative demands of contemporary information work. Adopting this framework requires a shift from content-driven instruction to process-oriented learning. This according to Darling-Hammond et al., (2020) involves prioritizing how students learn, think, and engage with information over the amount of content covered. Such a shift aligns with broader educational reforms that emphasize critical thinking and applied knowledge. The model also redefines the role of LIS educators. Rather than serving primarily as content experts, educators become facilitators of learning who guide inquiry, support collaboration, and encourage reflection. This shift demands new pedagogical skills and institutional support.

However, the implementation of the PDCLP Model is not without challenges. Institutional structures, accreditation frameworks, and assessment systems often remain aligned with traditional teaching approaches. As Juliani (2021) notes, educational change is frequently constrained by systemic and organizational factors. Failure to address these challenges may result in continued misalignment between LIS education and professional practice. If current trends persist, there is a risk that LIS programmes will continue to produce graduates who are technically capable but critically underprepared for the complexities of post-digital information environments.

Recommendations

To support the effective adoption of the PDCLP Model, several strategic measures are necessary. According to Saunders (2020) LIS curricula should be redesigned to prioritize problem-based and inquiry-driven learning approaches, allowing students to engage with authentic information challenges and real-world professional situations. Such an approach would move learning beyond rote content delivery toward deeper analytical and practical engagement. In addition, Fawns (2022) states that institutions should invest in hybrid learning infrastructures that meaningfully integrate physical and digital learning environments, reflecting the realities of post-digital information work and contemporary professional practice. This would enable students to develop competencies within interconnected information spaces that mirror actual LIS environments.

There is also a need for sustained professional development programmes for LIS educators to strengthen their capacity to adopt facilitative, learner-centered, and constructivist teaching approaches. Since the PDCLP Model redefines the educator's role from content transmitter to learning facilitator, continuous pedagogical training becomes essential for successful implementation. Furthermore, Tewell (2022) critical information literacy should be embedded across the entire LIS curriculum rather than treated as an isolated or standalone component. Integrating critical literacy throughout courses would ensure the continuous development of students' analytical, ethical, and evaluative competencies, particularly in addressing issues such as misinformation, algorithmic bias, and information inequality.

Assessment practices should also be restructured to emphasize reflective and practice-oriented methods, including portfolios, project-based assignments, experiential learning evaluations, and reflective journals. Such assessment strategies

would better capture students' ability to apply knowledge, engage critically with information systems, and reflect on professional experiences.

Finally, institutions must address broader structural barriers that constrain pedagogical innovation, including rigid curricula, traditional assessment frameworks, and institutional resistance to change. Without meaningful structural and policy reforms, the implementation of post-digital constructivist approaches in LIS education may remain limited and largely theoretical rather than transformative in practice.

Conclusion

Library and Information Science education is at a critical point of transition. While digital technologies have transformed information environments, pedagogical approaches have not evolved at the same pace. This paper has argued that the continued reliance on traditional and tool-focused teaching models risks producing graduates who are technically competent but insufficiently prepared for the complexities of contemporary information work. In response, the paper proposed the Post-Digital Constructivist LIS Pedagogy Model (PDCLP Model) as a conceptual framework for rethinking LIS education. By integrating active learning, hybrid environments, collaboration, critical literacy, and reflective practice, the model offers a more coherent and responsive approach to professional preparation. The significance of this shift extends beyond pedagogy. It speaks to the identity and relevance of LIS as a discipline. In a post-digital world, the role of LIS professionals is not only to manage information systems but to interpret, mediate, and critically engage with them. Ultimately, the future of LIS education will depend not on how well it adopts new technologies, but on how effectively it redefines learning to meet the demands of an increasingly complex and interconnected information landscape.

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