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Exploring School Librarians' Perceptions of Digital Books

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Abstract

Digital books have been available for decades, but many school librarians have been reluctant to expand their digital collection holdings (ebooks and audiobooks) for several reasons. Over the past two decades, research on the acceptance of digital books has mainly focused on universities and college students. This study aims to fill a gap by examining the attitudes and specific challenges faced by school librarians in the rural state of New Hampshire (USA). This exploratory qualitative research study, centered on the Technology Acceptance Model (TAM), examines school librarians' attitudes and perceptions toward the ease of use and usefulness of digital books in the school library collection. The findings reveal that while participating school librarians perceive digital books as useful and generally easy to use, technology acceptance remains highly conditional. Within this localized cohort, a school librarian's positive attitude to champion the format is systematically bottlenecked by a lack of explicit digital reading instruction, classroom teacher skepticism, and a persistent user preference for physical print. Rather than widespread adoption, these systemic barriers relegate digital books to grudging, transactional utility in schools. Ultimately, these findings highlight the necessity of collaborative, curriculum-integrated instruction and point to the need for broader empirical research to verify these acceptance barriers on a generalizable scale.

Introduction

Digital books (ebooks and audiobooks) have been available for decades, but many school librarians have been reluctant to increase their digital collection holdings due to several factors. These frequently cited barriers include the lack of devices or constrained storage space on devices (Dawkins & Gavigan, 2019; Rothman, 2017), limited interest from students (Vallée, 2020), the insufficiency of technical support (Vallée, 2023), quality of and design of digital books (Payne & Ralli, 2021), licensing challenges (Rothman, 2017), and persistent budget considerations (Vallée, 2020, 2023).

The COVID-19 pandemic served as a critical catalyst for digital integration, necessitating an abrupt shift in library programming and fiscal allocation when physical collections became inaccessible (Kletter, 2021; Morley, 2021). This period of forced adoption led to a surge in digital circulation and user engagement (Ellis & Jacob, 2021), demonstrating that digital access is no longer a peripheral service but a permanent requirement of the modern collection development landscape. Consequently, the crisis functioned as a proof of concept for the format's perceived usefulness, proving that digital books could sustain literacy engagement when traditional library service was not available. A revised understanding of the current state of digital books is therefore essential to inform post-pandemic collection development and long-term budgetary planning.

Research on digital book acceptance has primarily focused on university and college settings, where students generally own necessary devices and libraries operate with larger research-focused budgets (Baron et al., 2017; Levine-Clark et al., 2015). Within this post-secondary literature, studies have examined format preferences and tool use among undergraduates (Budnyk et al., 2021; Clinton-Lisell et al., 2020) and general adult readers (Baron, 2021). Conversely, research situated within K-12 environments has explored the lived reading experiences of high schoolers (Evans, 2017), the reading comprehension and metacognitive judgments of elementary school children (Halamish & Elbaz, 2020), and the overall circulation and collection development of digital books in high school libraries (Dawkins & Gavigan, 2019; Vallée, 2020). While these prior localized investigations–including our own baseline studies on New Hampshire school library systems (Vallée, 2020, 2023)–documented descriptive spending trends, circulation declines, and external technical hurdles, they left a critical theoretical gap. Those earlier studies operated primarily at a macro-logistical level, identifying what budget constraints, device limitations, and vendor barriers existed without explaining how or why school librarians internally navigate format integration.

To transcend these descriptive limitations, this current study represents a theoretical and empirical expansion of our prior research. Rather than re-documenting known logistical hurdles, we systematically introduce the Technology Acceptance Model (TAM) as an analytical framework. The TAM, developed by Davis (1989), remains a relevant theoretical framework because it simplifies the complex phenomenon of technology adoption into two core constructs that predict use: Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) (Ishengoma, 2024). These constructs provide the necessary lenses to systematically analyze the external factors influencing school librarians' decisions. This allows us to move beyond simple logistics and examine how internal cognitive, attitudinal, and systemic variables–such as classroom

teacher resistance, explicit digital literacy instruction, and the school librarian's personal print bias–interact to actively mediate and shape a school librarian's actual technology acceptance. By centering the school librarian's voice, this research seeks to uncover the systemic and personal variables that dictate whether digital books are integrated as essential tools or remain peripheral assets. This research was guided by the following questions:

1. How do New Hampshire school librarians perceive the PEOU of digital books?
2. What are New Hampshire school librarians' perceptions of the PU of digital books?
3. How do PEOU and PU affect the acceptance of digital books by New Hampshire school librarians for use in their school libraries?

Literature Review

Research concerning the utilization and acceptance of digital books has historically concentrated on academic and public library settings. This body of work primarily examines users who generally own their own devices and are affiliated with institutions with research-focused budgets. Within the K–12 context, existing scholarship remains narrowly focused on student preferences, often overlooking the perceptions of school librarians, the primary architects responsible for balancing curricular requirements with pleasure reading needs.

To establish a comprehensive body of evidence about the use and acceptance of digital books by school librarians, we conducted systematic searches across several interdisciplinary databases, including ERIC, PsycINFO, Web of Science, Scopus, and LISTA. The searches targeted peer-reviewed contributions published between 2000 and 2024 to capture the evolution of digital reading interfaces and shifting models of technology acceptance. To minimize publication bias, this search was expanded to include ProQuest Dissertations and Theses Global and Google Scholar. Furthermore, we incorporated localized data from the New Hampshire Department of Education and professional insights from the New Hampshire School Library Media Association (NHSLMA) online discussion group. This ensured the study remained grounded in the specific professional realities of the study's participants. Finally, we employed forward and backward citation chaining to identify seminal works and emergent trends that automated queries might have missed.

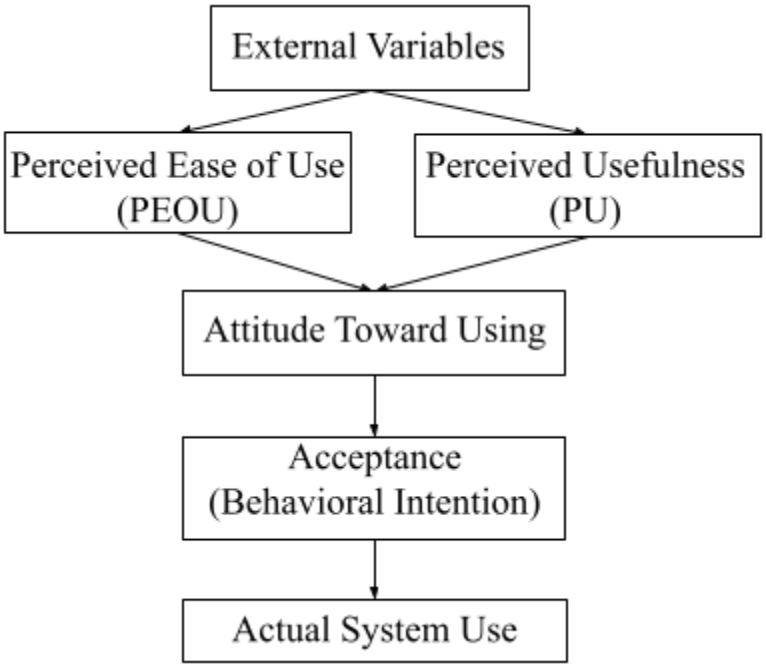
This literature review synthesizes current research across several critical themes: a comparison of reading types (print versus digital), the functional and aesthetic advantages and disadvantages of each format, the economic and operational hesitancy expressed by school librarians toward digital books, and the significant impacts of the COVID-19 pandemic on digital book usage. While previous studies have outlined school librarians' ambivalence toward increasing digital holdings (Vallée, 2020, 2023), the reasons cited often revolve around technical factors such as device access, technical support, and licensing. Crucially, our literature review revealed a defined and persistent gap in research regarding school librarians' explicit perceptions of the TAM framework, specifically, how institutional, pedagogical, and attitudinal barriers influence their assessment of the PEOU and PU of digital books. This study aims to fill this gap by

applying the TAM to understand the perceptions of New Hampshire decision-makers who manage school library collections. Consequently, the findings will inform librarian-led digital literacy instruction, collaborative classroom pedagogy, and district policy decisions, while also providing a theoretical foundation to guide pre-service educator training and graduate programs in school librarianship.

Theoretical Framework

As technology entered mainstream society, researchers recognized the need to understand why some individuals embraced new systems while others resisted them. The TAM remains a foundational framework for examining and predicting user attitudes towards—and ultimate use of—technology (Davis, 1989; Ishengoma, 2024). Derived from the Theory of Reasoned Action and the Theory of Planned Behavior (Granić & Marangunić, 2019), TAM was conceived as a pioneering framework intended to understand and predict user acceptance (Ishengoma, 2024). Its primary strength lies in its ability to simplify the complex phenomenon of technology adoption into two key measurable constructs: PU, which is the degree to which a person believes using the technology will enhance performance, and PEOU, which is the perceived freedom from effort required to use the technology (Davis, 1989). These two constructs influence a user's attitude towards using the technology, which then directly predicts the behavioral intention to use it (see Figure 1). These factors, which represent a multitude of external influences (Trotta, 2018), collectively motivate acceptance and use of the technology, or rejection and refusal to use it (Granić & Marangunić, 2019).

Figure 1
The Technology Acceptance Model (TAM). Adapted from Davis (1989)



Despite its origins in an earlier technological era, TAM remains a dominant theoretical lens because of its generalizability across diverse information systems and its continued ability to explain users' intentions towards technology acceptance (Ishengoma, 2024). The model has been enhanced, expanded, applied, validated, and used in a wide range of domains studying information systems (Mailizar et al., 2021), advanced technologies (Ishengoma, 2024), and library science (Luo et al., 2021). Its framework also serves as the foundation for newer models such as Revised TAM (TAM-R), which excluded the attitude construct (López-Bonilla & López-Bonilla, 2017), or the Unified Theory of Acceptance and Use of Technology (UTAUT), which integrates elements from eight distinct acceptance models (Feng et al., 2025).

For the purpose of this study, we elected to use the original TAM rather than more recent versions to retain the attitude construct. Because the personal journey of school librarians is a central focus of this research, we required a model that treats attitude as a critical mediator of emotion. By employing the original model, we could specifically analyze how internal disposition predicts the intention to adopt digital books–a nuance that might be lost in the more streamlined TAM-R or the broader UTAUT.

Nature of Reading and Format Influence

Reading has been defined as a two-step language skill that allows an individual to meaningfully decode and comprehend either a written discourse (Loh & Sun, 2019; Schwabe et al., 2022) or its faithful audio representation (Nash, 2023). This process involves first recognizing the sensory material (ink, screen, or sound waves) and subsequently negotiating these representations to actively construct and interpret meaning (Rowsell, 2014; Sackstein et al., 2015). Given this complexity, the specific technology used critically influences the reader's experience and interaction with reading (Kosch et al., 2021). The evolution of modern literacy has transformed reading from the ability to decode basic texts to the need to comprehend increasingly complex information across diverse formats (Baron, 2021). For school librarians, this transformation highlights a key professional responsibility: understanding the reader's purpose to appropriately guide them in selecting the most effective format, digital or print, for their current reading goal (Rivers, 2016).

According to Rivers (2016), there are three main types of reading: informational reading, reading for pleasure, and academic reading. Informational reading is concerned with acquiring facts. Pleasure reading is more focused on creating a world in one's mind. For academic reading, however, building a critical mass of knowledge is important to address one's research needs (Mizrachi, 2015). Academic reading requires synthesizing the information and grafting it onto an internalized body of knowledge through processing and reflection (Singh & Alexander, 2022). These types of reading suggest that digital books are well suited for informational reading, when the reader needs to perform only superficial reading and can quickly scan material to locate exactly what they are looking for. In contrast, print books are better suited for sustained reading and academic purposes, which require a deep understanding of the material (Budnyk et al., 2021; Luo et al., 2021).

Print Versus Digital Modalities

Extensive research suggests that under controlled experimental conditions, there are no significant differences in comprehension outcomes between digital and print modalities (Baron et al., 2017; Clinton-Lisell, 2023; Sackstein et al., 2015; Sage et al., 2020; Schwabe et al., 2021; Shin et al., 2022; Sommers et al., 2019). This parity has been found to remain consistent across diverse metrics, including text length (Ross et al., 2017; Sackstein et al., 2015; Sage et al., 2019; Singer Trakhman et al., 2018; Stiegler-Balfour et al., 2023), meta-comprehension awareness (Clinton-Lisell, 2023; Halamish & Elbaz, 2020; Schwabe et al., 2021), reading speed (Schwabe et al., 2021), reader engagement (Clinton-Lisell, 2023; Schwabe et al., 2021), reading purpose (Clinton-Lisell, 2023), time spent reading (Sommers et al., 2019), and distractions or mind-wandering (Clinton-Lisell, 2023).

However, significant performance variances have been found to emerge when accounting for environmental and learner-specific variables. Multitasking, the cognitive load of scrolling, and digital distractions have been shown to negatively impact deep comprehension (Baron et al., 2017; Delgado et al., 2018). Furthermore, the medium's impact is often developmental. Although researchers have found that elementary students may demonstrate superior outcomes in print (Halamish & Elbaz, 2020), English Language Learners have often achieved significantly higher comprehension levels via digital formats due to embedded linguistic scaffolds like digital dictionaries (Rifiyani et al., 2022). Conversely, when examining native English-speaking college students with no documented learning disabilities, readers with lower baseline comprehension skills have been found to experience a decline in performance when transitioning to digital text, likely due to a lack of explicit digital navigation strategies (Stiegler-Balfour et al., 2023). Despite these nuanced empirical findings, Baron et al. (2017) found that a persistent cultural preference for print remains. McVicker (2017) found this attitudinal barrier to be rooted in the perception of print as an intimate and authoritative medium, in contrast with the perceived impersonality and volatility of digital text. In the context of TAM, this preference suggests that even when PU has been empirically proven, subjective attitude remains a powerful mediator of ultimate acceptance.

Economic and Operational Barriers to PU

School librarians' decisions regarding digital book adoption have been found to be mediated by external financial variables, primarily budgetary constraints and uncertainties regarding long-term usage rates (Dawkins & Gavigan, 2019; Vallée, 2020). These fiscal pressures, often imposed by district administration, directly impact a platform's PU. Specifically, in rural areas facing declining student enrollment, the rising per capita cost of digital access can make the return on investment difficult to justify (Vallée, 2020). This skepticism is reinforced by empirical data on circulation. Dawkins and Gavigan (2019) found that when digital books represent a disproportionately low share of total usage, the school librarian's perception of the format's intrinsic value was negatively recalibrated.

Furthermore, the paradigm shift from ownership to access introduces significant operational risk. Unlike physical books, which represent a onetime capital expense and perpetual ownership, digital platforms generally operate on recurring subscription models. In these subscription-based

systems, the cessation of payments results in the immediate forfeiture of all assets (Rothman, 2017). This volatility of access acts as a deterrent; consequently, the majority of school librarians in a 2023 study reported allocating 20% or less of their acquisition budgets to digital resources. This is a spending level they said they intended to maintain (Vallée, 2023). Ultimately, these cost-benefit doubts can serve as a systemic barrier to acceptance. For decision-makers, a technology's PU is not a static trait but a value that must be constantly defended against the risks posed by vendor-dependent platforms and institutional stability.

Functional and Aesthetic Trade-Offs

Digital books provide significant logistical and functional advantages, enhancing their PU. They offer 24/7 access from anywhere across a variety of languages and facilitate the immediate retrieval of information through their unique efficiency as a fully searchable system (Levine-Clark et al., 2015; Vallée, 2023). Digital files are instantly accessible upon purchase and can be customized with features such as text-to-speech, interactive media, and larger fonts, significantly improving accessibility for diverse learners (Schwabe et al., 2022). Furthermore, digital resources often offer budgetary benefits by being priced lower than print and allow the library to mitigate the environmental impact associated with the production and physical transport of print materials, assuming that the reading device is used over a long lifespan (Budnyk et al., 2021; Clinton-Lisell et al., 2020). Print books, conversely, suffer limitations in this domain. They are subject to library hours, cannot be customized, and are difficult to transport or manipulate for individuals with disabilities (Kuzmičová et al., 2020; Rivers, 2016).

The advantages of print books reside largely in the tactile experience and its positive impact on sustained engagement. Print books offer a singular purpose that minimizes distraction, aiding deep understanding and discouraging the "mind-wandering" associated with electronic screens (Hargreaves et al., 2022; McVicker, 2019). The physical object provides sensory cues such as the smell and feel of turning pages, and the ability to gauge location by thickness, that reinforce a reader's connection to the text and have been found to aid cognitive navigation (Loh & Sun, 2019; Sage et al., 2019). These cues contributed to print remaining the preferred format for most readers in the 2021 study by Budnyk et al. Digital books are at a disadvantage in this area. They reduce sensory experiences, and the device itself can be distracting, hindering sustained reading and contributing to eye strain and additional screen use (McVicker, 2017; Rivers, 2016). Digital books also require a certain level of expertise to access and maintain, and not all devices can access all platforms (Dawkins & Gavigan, 2019; Ross et al., 2017).

Accessibility and Inclusive Design

Digital books offer transformative affordances for differently abled students, serving as vital pedagogical scaffolds that can overcome barriers created by traditional print materials (Vallée, 2023). For students with physical impairments, such as cerebral palsy, digital platforms like Bookshare Library (with Bookshare Reader) provide access to audiobooks and ebooks, supporting independent reading and navigation that would be impossible with a physical book (Sage et al., 2019). Customization features, such as font enlargement, adjustable background lighting, and specialized dyslexia-friendly fonts, enable visually impaired and neurodiverse learners to fine-tune the reading experience to their specific sensory and cognitive needs

(McVicker, 2019; Rivers, 2016). Furthermore, built-in text-to-speech and dictionary tools are particularly beneficial for students with dyslexia or attention-deficit/hyperactivity disorder (ADHD), as these features reduce the cognitive load associated with decoding and help maintain sustained focus (Knutson, 2019; Singh & Alexander, 2022).

Another benefit is that ubiquitous handheld devices such as iPad tablets facilitate a more inclusive classroom environment. Students receiving special education services can engage with necessary modifications while using the same hardware as their peers, thereby reducing the social stigma and emotional distance often associated with specialized assistive technology (Evans, 2017).

School Librarian Hesitancy and the Catalyst for Forced Adoption

Despite their professional commitment to providing diverse formats, such as large print, graphic novels, and audiobooks, many school librarians have been found to be hesitant to promote digital books equally (Vallée, 2020). This reluctance stems from several existing barriers that challenge the digital format's PEOU and PU.

The primary sources of reluctance have been found to include inconsistent student device access, the absence of technical support (forcing school librarians to troubleshoot technology outside their expertise), and questions about the value and validity of digital reading itself (Baron, 2021; Dawkins & Gavigan, 2019). Furthermore, Dawkins and Gavigan (2019) found that a school librarian's personal bias for or against digital formats can directly influence purchasing and deployment decisions. Compounding this difficulty is the challenge of promotion, as digital books lack the physical presence needed for easy display on shelves (Vallée, 2020).

Despite this hesitancy on the part of school librarians to include digital books in their collections, electronic resources offer clear operational opportunities that enhance PU. Digital licensing models enable the easy assignment of book sets, ensuring equitable access for all students and simplifying logistics by eliminating the need to store and manage large quantities of intermittently used print books (Ellis & Jacobs, 2021). School librarians can also leverage access to digital books offered by local public libraries through collaboration, significantly increasing resource availability (Goddard, 2020; Rothman, 2017).

The COVID-19 pandemic served as a critical catalyst, abruptly accelerating the adoption of digital books across the school library landscape. With physical collections inaccessible to learners, school librarians reported redirecting their spending towards digital books to ensure continuity of service (Morley, 2021). Even without explicit administrative direction, many school librarians were found to have quickly shifted funding from print to digital to maintain patron access (Young, 2020).

This shift resulted in a demonstrable increase in usage. Public libraries reported significant surges in digital engagement, with the platform OverDrive noting an 87 percent increase in juvenile and young-adult ebook checkouts (Goddard, 2020). The pandemic effectively overcame pre-existing reservations by exposing users and educators to the benefits of the digital format (Vallée, 2023). This forced adoption accelerated the understanding of the value of digital books

and their integration in library collections. Therefore, digital books will likely remain a critical and established component of library collections alongside printed books (Ellis & Jacobs, 2021).

Cognitive and Pedagogical Affordances of Audiobooks and Bimodal Reading

While some educators historically marginalized listening-based literacy as "fake reading" (Knutson, 2019), contemporary empirical research demonstrates that audiobook listening and print reading share deep cognitive commonalities (Singh & Alexander, 2022). For typical adult readers under controlled experimental conditions, Rogowsky et al. (2016, as cited in Singh & Alexander, 2022) documented equivalent comprehension outcomes across print, audio, and bimodal (simultaneous listening and reading) modalities. To understand how audiobooks support readers who struggle, scholars frequently draw on Scarborough's Reading Rope Theory (2001, as cited in Knutson, 2019), which suggests that when weak word recognition strands (such as decoding) consume a reader's cognitive resources, comprehension is compromised. By bypassing these lower-level decoding bottlenecks, audiobooks act as an auditory scaffold that frees up working memory for higher-level meaning-making—a process Le Fevre et al. (2003, as cited in Singh & Alexander, 2022) termed "cognitive bootstrapping." Furthermore, aligning audiobook availability with Self-Determination Theory indicates that reducing decoding frustration enhances students' self-perceived competence, which in turn fosters intrinsic reading motivation and voluntary engagement (Knutson, 2019).

The benefits of co-presenting an audiobook alongside printed text—known as bimodal reading—are particularly pronounced for specialized and language-learning populations (Singh & Alexander, 2022). In secondary education, Boyle et al. (2003, as cited in Singh & Alexander, 2022) found that high school students with mild cognitive, speech, or learning disabilities achieved large comprehension gains when utilizing audio-assisted textbooks compared to traditional print. Similarly, bimodal reading serves as a vital pedagogical bridge for English Language Learners (ELLs). Woodall (2010, as cited in Singh & Alexander, 2022) documented that simultaneous auditory and visual input significantly enhanced second vocabulary knowledge, detail recall, and gist understanding among college-level language learners. Extensive reading with audio support has also been shown to improve second language vocabulary acquisition and overall reading rates by strengthening word-meaning and letter/sound associations (Webb & Chang, 2015, as cited in Singh & Alexander, 2022).

Despite these clear benefits, researchers have identified distinct cognitive and structural trade-offs inherent to auditory processing (Singh & Alexander, 2022). Unlike physical text, which remains static on the page to facilitate look-backs, audio input is transient and impermanent (Singh & Alexander, 2022). In a comparison of story summaries, Kintsch and Kozminsky (1977, as cited in Singh & Alexander, 2022) found that while reading and listening groups achieved equal structural completeness, the audiobook group included significantly more irrelevant details, and the print group spent more time actively looking back at the pages. Furthermore, the auditory medium can alter a reader's attention allocation; Varao Sousa et al. (2013, as cited in Singh & Alexander, 2022) found that college students experienced significantly higher rates of mind-wandering and poorer comprehension when listening to a text compared to reading it. To mitigate these attention challenges, modern digital interfaces allow readers to customize their sensory experience through self-regulation tools, such as adjustable playback speed, which helps

align narration rates with an individual's cognitive processing capacity (Knutson, 2019; Singh & Alexander, 2022).

Summarizing the Literature

The existing literature revealed a fundamental tension in K–12 librarianship between cautious investment and recognized utility. School librarians show consistent fiscal hesitation, maintaining stagnant digital book budgets because of low student circulation for pleasure reading and uncertainty about the investment's cost-effectiveness. Despite this caution, school librarians simultaneously have acknowledged the substantial value of digital books, citing their PU for curriculum support, ease of access, and multi-user use. This conflict was underscored by the COVID-19 pandemic, which catalyzed the adoption of electronic resources and confirmed that digital books must be an established and permanent component of the collection.

Although our previous work (Vallée 2020, 2023) established that New Hampshire school librarians maintain low digital allocations and express professional ambivalence due to external issues like licensing models and inadequate technical support, those findings remain descriptive and do not map the underlying cognitive architecture of the decision-makers themselves. Crucially, our broader literature review reveals a persistent conceptual gap at this intersection: K-12 technology acceptance research has yet to fully explore how non-technical, organizational, and pedagogical factors actively mediate a school librarian's internal assessment of ease of use and format utility.

This study directly addresses this gap by expanding on the descriptive foundations of Vallée (2020, 2023). By utilizing the TAM framework, we systematically unpack how broader institutional, pedagogical, and personal attitudinal barriers actively shape how New Hampshire decision-makers assess the PEOU and PU of digital books to govern their collection development decisions.

Methods

This study employed an exploratory qualitative design (Merriam & Tisdell, 2016) to examine how school librarians interpret their experiences with digital books and how these experiences affect their perceptions of the format within the school library collection. The research utilized the TAM as its theoretical framework to investigate school librarians' attitudes and their acceptance—or not—of digital books in their school library collections. Data were collected in two sequential phases: first, through an initial qualitative survey of New Hampshire school librarians, followed by in-depth, semi-structured interviews with a smaller group of participants. The first author conducted both the survey and the interviews. Both authors were involved in data analysis.

Participants

As previously mentioned, New Hampshire (where the first-named author serves as a school librarian) is an interesting site for inquiry because of its rural nature and tradition of robust local control. This decentralized environment grants school librarians significant autonomy in collection development, and often requires them to manage resources across multiple geographically dispersed campuses. The State of New Hampshire contains 656 schools (including public, private, and charter) and employs 326.3 full-time equivalent (FTE) school librarians (New Hampshire Department of Education, 2022a, 2022b). Because the New Hampshire Department of Education does not compile a total headcount of individual school librarians–reporting staffing data exclusively through the standardized metric of FTE–this baseline serves as the only viable statewide measure for school library resource allocation. Using the FTE metric matters for rural librarianship research; headcounts fail to capture the reality of split-site, part-time, or multi-level configurations under strong local control, since school librarians in rural districts frequently split their time across multiple buildings, and a single school librarian may serve more than one school level. Twenty-one school librarians participated in the initial qualitative survey, representing approximately 6 percent of the state's total FTE population.

The 21 respondents reported a total of 30 roles, confirming the multi-site/multi-level nature of school librarianship in the state (11 elementary, 8 middle, 10 high school, and one pre-service librarian). The sample is not intended to represent the state's overall school configuration (which has a significantly higher proportion of elementary schools). Rather, it provides a diverse snapshot of experience across all grade levels.

While 10 of the 21 survey participants initially indicated interest in follow-up interviews, only five ultimately agreed to participate in the in-depth, semi-structured interviews. Three interviewees served as middle/high school librarians in single-library buildings, while the remaining two were high school librarians only. No elementary school librarians were available to participate in the final interview sample. Conversations with the interviewees were recorded, transcribed, and used to triangulate and enrich the interpretation of the data collected from the initial survey.

Ethical Considerations

This research was conducted in strict adherence to established ethical standards for studies involving human subjects. The study protocol and the data gathering instruments were reviewed and approved by the Institutional Review Board (IRB) at Boise State University (IRB Protocol #101-SB22-197), and the study was determined to pose minimal risk to participants. Prior to participating in the qualitative survey and subsequent semi-structured interviews, all participants were provided with informed consent documentation that detailed the study's objectives, the voluntary nature of participation, and the right to withdraw at any time without prejudice (see Appendix A). Participants received no financial compensation for their involvement. Participation was entirely voluntary and free from coercion.

To protect participant confidentiality, all data were de-identified during the transcription and coding processes, with pseudonyms chosen by all interviewees. Data handling followed proper

research standards (Creswell & Creswell, 2022), with all recordings and transcripts stored in password-protected, encrypted environments accessible only to us. We maintained these records for three years after the study's completion, after which we permanently destroyed them. We declare no conflicts of interest and confirm our adherence to professional research responsibilities and ethical principles throughout the study.

Instruments and Data Collection

Data collection was conducted sequentially in two qualitative phases: an initial qualitative survey followed by semi-structured interviews with a subset of survey respondents. The study commenced in September 2022 with the qualitative survey administered via Qualtrics (see Appendix A). The instrument was distributed via the New Hampshire School Library Media Association's (NHSLMA) online distribution group on three separate occasions across September and October 2022, as schools transitioned out of pandemic-related service disruptions. The survey included demographic inquiries and open-ended prompts designed to elicit school librarians' nuanced perceptions of digital books. Specifically, the inquiry focused on how school librarians' internal attitudes influence collection development and whether their assessment of the format's PU has evolved since the onset of the pandemic. This initial phase provided the broad contextual data necessary to identify emergent themes, which were then explored with greater depth during the subsequent semi-structured interview phase.

Following the close of the survey in late October 2022, we observed a waiting period of approximately five months while the initial qualitative data were compiled and analyzed. This analysis period was necessary to identify the broad, emergent themes used to construct the subsequent semi-structured interview protocol, which was refined to incorporate questions and concerns prioritized by the survey respondents themselves. The semi-structured interview phase began in April 2023 and concluded in June 2023.

Respondents who indicated interest provided contact information during the survey phase for the interview phase. The first author conducted semi-structured interviews (see Appendix C) via Zoom, each lasting approximately 30 minutes. Interviews were audio-recorded and AI-transcribed for analysis (Zoom Video Communications, 2023). Transcripts were reviewed and corrected to ensure they matched the audio recordings.

The interview protocol was constructed using the TAM as a framework, systematically exploring the school librarians' PEOU and PU of digital books in their collections. Each interviewee was asked the same set of questions, designed to confirm survey responses and elaborate on key themes, including the influence of personal bias on collection decisions, changes in attitudes toward digital books since the pandemic, and observed differences in student engagement ("reading") between digital and print books. Crucially, the protocol also incorporated specific questions generated by the school librarians themselves during the initial survey phase, ensuring the research addressed issues prioritized by the participants.

Instrument Construction and Validation

The study's instrumentation, including both the survey and the semi-structured interview protocol, was constructed through a process systematically grounded in the study's theoretical framework and empirical literature. Specifically, questions were formulated to measure the core TAM constructs: PEOU and PU. Furthermore, the selection of specific scenarios and question phrasing was validated by prior empirical findings on digital book adoption challenges in school libraries (Vallée, 2020, 2023). This foundation ensured that the instruments addressed variables known to influence school librarian perceptions and provided a direct path for analysis using the TAM framework.

To ensure instrument validity, clarity, and relevance, both the survey and the interview protocol were pilot-tested before the main data collection. The instruments were administered to a small, representative group of school librarians with demographic and professional characteristics similar to those of the final study sample. Feedback from this pilot testing was used to achieve three goals: refine clarity by eliminating ambiguous phrasing or jargon in the questions, establish relevance by confirming that all questions elicited responses relevant to the study's research objectives, and validate instrument length to minimize participant burden and maximize the response rate. These validation steps were essential to ensure the reliability of the data collected regarding New Hampshire school librarians' perceptions and attitudes.

Data Analysis Procedures

The first step in data analysis involved establishing the direct relationship between the study's research questions (RQs) and the instrument items (Anfara et al., 2002). This was achieved through a deductive mapping process, in which instrument questions were designed to serve as indicators of the core TAM constructs of PEOU and PU, based on their operational definitions in the literature. While the RQs focus specifically on PEOU and PU, the instrument was intentionally designed to capture data on Attitude and Acceptance as well. This is because, within the full TAM framework, PEOU and PU are independent variables that cause Attitude, which in turn predicts Acceptance, the behavioral intention to use. Therefore, the instrument included questions related to all constructs and contextual factors (e.g., interview questions 12, 18, and 19), ensuring a comprehensive analysis of the full acceptance model. Table 1 illustrates this direct mapping of survey (S) and interview (I) questions to the core constructs under investigation.

Table 1

Relationships Between the Research Questions and the Instrument Questions

Research question	Instrument question (survey, interview)
How do New Hampshire school librarians perceive the ease of use of digital books?	S3, I6, I10

Table 1

Relationships Between the Research Questions and the Instrument Questions

Research question	Instrument question (survey, interview)
What are New Hampshire school librarians' perceptions of the usefulness of digital books?	S4, S5, S6, S7, S8, I4, I7, I8, I11, I13, I14, I15, I16
How do PEOU and PU affect the acceptance of digital books by New Hampshire school librarians for use in their school libraries?	S5, S6, S7, S8, I4, I12, I18, I19

Qualitative data from both the survey open-ended responses and the full interview transcripts were imported into NVivo 14 for systematic analysis. The coding process followed a two-cycle approach to ensure rigor. During the first cycle, we performed a preliminary analysis by assigning descriptive codes to the data (Miles et al., 2020). This step included developing a preliminary codebook and applying it to a subset of the transcripts for calibration (Miles et al., 2020). Initial codes were generated deductively (from the TAM framework for PEOU, PU, and Acceptance) and inductively (allowing emergent codes like timeliness, promotion, and screen time to be added).

The second cycle involved reviewing, grouping, and reorganizing these initial codes into larger thematic units (Miles et al., 2020). After refining the codebook with clear operational definitions, these thematic units were applied to all remaining material. Table 2 displays the evolution from the initial granular codes (first cycle) to the final thematic units (second cycle). Specific, rich quotes were identified and documented to serve as illustrative examples in the results and discussion sections, capturing the nuance of school librarians' attitudes toward digital books, both personally and in relation to their library collections. Once all material was coded, the final groupings were systematically examined and categorized according to their alignment with one of the three TAM factors that influence adoption.

Table 2

The Two Cycles of Coding

Initial codes (1st cycle of coding)	First grouping	Thematic units (2nd cycle of coding)
Easy to use	Positive ease of use	PEOU
Single sign-on		
Access		
Searchability		
Previous experience		
Struggle	Negative ease of use	
Hard to use		
Age of reader		
Previous experience		
Usefulness	Usefulness	PU
Speed of procurement and deployment		
Access		
Privacy	Specific Populations	
ELL		
Special education		
Differently abled		
Accessibility features		
Equity		
Struggle	Scholarly	
Timeliness		
Searchability		

Table 2

The Two Cycles of Coding

Initial codes (1st cycle of coding)	First grouping	Thematic units (2nd cycle of coding)
Research		
Promotion	Lack of a physical presence	
Shelving and storage		
Display		
Attitude	Attitude	Acceptance
Satisfaction	Experience of Reading	
Sensory experience		
Curiosity		
Screen time		
Different reading format		
Classroom teacher impact		
Teaching how to read digitally		

We established qualitative trustworthiness through several measures. The interview findings are conveyed through narrative passages that feature multiple perspectives (Creswell & Creswell, 2022). We also used triangulation to confirm findings by documenting at least three similar perceptions and experiences from different participants or survey results across the dataset (Creswell & Creswell, 2022).

Limitations of This Study

While this methodology was designed to establish a rigorous, triangulated audit trail of school librarians' experiences, several key limitations must be acknowledged before presenting our findings. First, this research provides a local snapshot of technology acceptance within New Hampshire's highly decentralized, local-control educational landscape, which may restrict the direct transferability of the findings to more centralized or urban school districts. Second, because participation was voluntary, self-selection bias may have influenced our sample; school librarians with strong positive or negative feelings regarding digital books may have been more motivated to participate than their more neutral peers.

Third, a significant limitation is the grade-level representative skew within our qualitative data. Although our initial survey captured broad grade-level representations across K-12 roles (including 11 elementary school roles), no elementary school librarians were available to participate in the follow-up semi-structured interviews. Consequently, the deeply voiced "lived experiences" analyzed in the second phase of this study are heavily weighted toward middle and high school contexts. This limitation highlights the need for caution when interpreting our developmental recommendations and underscores a critical area for future, targeted qualitative inquiry in primary-school contexts.

Fourth, because different digital book vendors employ vastly different technical features—including varied interface customization, installation protocols, and annotation tools—school librarians' perceptions are often shaped by these platform-specific experiences. Furthermore, variability in procurement models (bundled subscriptions versus title-by-title curation) and access terms (simultaneous-user limits or usage-based renewal triggers) significantly influences the PEOU and PU of the format. While these external factors affect a school librarian's stance, participants likely conflate their frustration with specific vendors with their overall perception of digital books as a general medium. Consequently, while this study identifies overarching themes of acceptance, it recognizes that this platform-specific bias remains a limitation.

Findings

This section presents the findings obtained from the qualitative data, integrating responses from the anonymous survey with detailed insights from the five semi-structured interviews. All direct quotes used throughout this section are attributed (using a pseudonym) to an interviewee; quotes not attributed to a specific name were extracted from responses to the open-ended survey questions.

External Variables Inhibiting PEOU

While reading interfaces are often designed to be intuitive, their ease of use is not static. Instead, it depends heavily on external variables that can introduce significant cognitive friction. In this study, two primary external antecedents–the systemic pedagogical gap and sensory-tactile disruption–were found to actively degrade PEOU.

Although successful digital reading requires distinct cognitive strategies, most readers are never explicitly taught how to navigate and utilize digital books effectively compared to traditional print (Clinton-Lisell et al., 2020; Hargreaves et al., 2022; Ross et al., 2017). This external pedagogical gap forces students to develop their digital reading habits primarily through independent trial and error, creating immediate user friction. (Hargreaves et al., 2022). Carrie highlighted how this lack of instruction directly undermines PEOU, particularly when paired with state testing requirements: "We realized that we are teaching students to read and annotate on paper, but we have not taught them how to read and annotate digitally. And now we're assessing that way."

This institutional friction is further compounded by a pervasive, false assumption among educators. Sam observed that the "expectation … from some librarians is that, well, because they already know how to do that [digital task], and they don't." By assuming that recreational device use translates to academic fluency, schools fail to provide targeted instruction, thereby artificially lowering PEOU and leaving students operating as "digital transients" who struggle to navigate academic reading interfaces.

A second external variable degrading PEOU is the virtual nature of digital media, which lacks the tactile feedback and spatial stability inherent in physical paper. This physical-to-digital transition disrupts traditional spatial mapping during reading, increasing cognitive effort and lowering PEOU. Ursula vividly captured this sensory disruption when reflecting on her personal resistance to digital books: "I like the act of physically going through a book and flipping pages and having a bookmark and watching, you know, tracking my progress. I feel that there's an emotional distance when I'm not reading a print book." An anonymous survey respondent echoed this sentiment, noting that screen reading "removes some of the experience of reading with which I am most familiar." This lack of physicality deprives readers of the traditional sensory cues and spatial coordinates, such as the physical thickness of a book's pages, that historically anchored the cognitive and emotional experience of literacy, degrading the format's ease of use.

External Variables Inhibiting PU

Although participating school librarians recognized the high baseline usefulness of digital books for database searchability and accessibility, external social and physical variables heavily constrain their realized usefulness on the school floor. Specifically, classroom teacher resistance and the lack of a physical presence act as negative antecedents that diminish the format's overall PU.

Within the school ecosystem, classroom teachers operate as critical gatekeepers whose pedagogical attitudes directly shape whether students perceive a digital tool as useful. When teaching staff refuse to validate digital reading, they dismantle its academic utility. Debbie expressed the frustration of this barrier, noting that her "English department still fights me, and says that's not reading." This institutional resistance persists even when digital technology matches or exceeds classroom requirements. Amber recounted a high school English teacher who rejected Sora for a highlighting assignment–opting to stick "with the old ways"– even after Amber demonstrated that "students can annotate and highlight" directly within the application. Furthermore, this teacher-led de-validation is often driven by classroom management concerns rather than pedagogical ones. One survey respondent observed that classroom teachers often mandate physical print books to prevent the "misuse/abuse of digital devices in class," where students may appear to be reading but are actually distracted by alternative applications. Anticipating classroom device bans and teacher skepticism directly suppresses a school librarian's motivation to expand digital holdings, as the format's academic utility is artificially blocked at the classroom door.

The physical layout of the school library constitutes another external variable that actively degrades PU by hindering format discovery. Because digital books lack a tangible footprint, they

are significantly harder to promote and display. This lack of physical presence suppresses the serendipitous browsing that traditionally drives library circulation (Gray & Howard, 2017; Rutherford et al., 2018; Vallée, 2020).

Additionally, this invisibility makes digital collections harder for some school librarians themselves to curate, particularly when they lack technological confidence. For instance, Ursula noted that because she struggles with technology and doesn't always know what digital options are available, prior negative experience and lack of knowledge "make it harder to curate a collection that has to do with digital media." This curational friction is further exacerbated by the absence of visual cues; a survey respondent remarked that working with physical space and books "allows me to see what is available and frequently used simply by looking around," a vital monitoring and promotion strategy that cannot easily be emulated in a virtual space. Without physical displays to spark student interest or visual cues to guide school librarian curation, digital collections remain hidden, severely limiting their practical utility within the school community. To combat this bias, school librarians must invest substantial energy into staff advocacy. Carrie noted that she is constantly working to convince teachers that digital reading "is still reading, and it's not a cop-out," observing that teacher validation is integral to shifting student reading habits.

Beyond classroom teacher skepticism, a highly prominent external variable that constrains the realized usefulness of digital collection is the behavioral response of the students themselves. A pervasive pattern of "grudging utility" emerged across both our survey and interview datasets: while students readily accept digital formats when mandated for academic tasks or transactional convenience, they flatly reject them for voluntary leisure reading. One survey respondent captured this stark contextual split, observing that: "many seem to view digital as either a super-convenience or as work–i.e., yet another screen. Print books are for leisure, it would seem."

This external behavioral barrier is quantitatively supported by Ursula's school-level survey, where 92.3 percent of her students reported a preference for print books despite having access to 1: 1 school-issued devices. Statewide survey data further corroborate this: while print circulation has maintained steady growth or increased, ebook circulation has remained largely stagnant, with school librarians observing that "students tend to not read ebooks in school; it's not a popular option."

Qualitative interviews vividly illustrated how this voluntary rejection limits the practical utility of digital acquisition. Sam observed that while he successfully guided students to navigate digital books for informational, keyword-searchable research tasks, their cooperation ended at the boundary of academic curriculum: "If it's just for fun reading, they're gonna want a physical book." Similarly, Debbie recounted her frustration when attempting to steer students toward available electronic formats to bypass physical checkout bottlenecks, only to receive the blunt response, "yeah, I don't read ebooks." Finally, Amber noted that the marginal success her school library experienced with digital reading was almost exclusively academic rather than voluntary: "In terms of how the app is being used in the school academically? Middle school is definitely taking more advantage of that. But that's coming from a teacher integrating it." Collectively, these findings demonstrate that digital formats occupy a highly restricted, non-voluntary niche of forced utility, student behavior directly suppresses the overall PU and circulation velocity of the digital collection.

Perceived Usefulness (PU) of Digital Books

School librarians who participated in the study overwhelmingly perceived digital books as useful, citing their assumed superior functionality and their ability to serve diverse learners. The findings regarding PU fell into three main categories: functional utility and searchability, enhanced accessibility, and operational advantages.

Functional Utility and Searchability

The most often cited aspects of digital books that participating school librarians found useful were ease of access and searchability. Digital books ensure readers always have a book at their fingertips, a point emphasized by a participant who said, "much of reading is about access." Additionally, the immediacy of procurement was cited as having a dramatic impact on students' desire to read, as books are available within minutes of ordering, rather than days or weeks. For Carrie, the speed is so dramatic that students frequently "finish reading the ebook or audiobook before the print book even arrives," even when the print book has been ordered with two-day shipping. Because they are in a rural area, it might still take "over a week to get [the print book] from the day that it's ordered" due to processing and shipping delays.

Searchability was also highly valued, particularly for nonfiction and research tasks. Participants reported utilizing the ability to, as one respondent phrased it, "control-F for specific terminology." Sam stated that searchability "is really like my favorite thing … just being able to type a phrase, it will spit out every instance in the book or that word or phrase." This feature "is just absolutely incredible and way easier than having to flip through pages and try to find" specific information.

Enhanced Accessibility for Specific Subgroups

Participants reported that digital books are especially beneficial for specific subgroups: special education students, ELL students, and visually impaired students. The extensive customization and accessibility tools (e.g., text-to-speech, font alteration) allow readers to overcome physical and cognitive obstacles.

Accessibility features enable readers to alter text by modifying font, size, and background. Carrie reported that these features "can really fine-tune the things that make it either more accessible to them, either visually or having the ability to change to a dyslexic [friendly] font, which makes them more apt to read because it's less challenging or more interesting." Text-to-speech features allow any ebook to be read aloud, providing a vital scaffold for students who struggle with traditional decoding, allowing diverse learners to navigate complex informational content more independently. Interview participants actively highlighted the functional utility of customizable audio playback speed as a vital self-regulation tool. Both Debbie and Carrie observed that standard recording narration speeds could feel tedious or "painful" for students, which often led to a rapid loss of focus. They noted that allowing students to customize and accelerate playback speeds served as a crucial scaffold to maintain cognitive focus, reduce attention drift, and diminish mind-wandering during independent reading sessions.

Furthermore, the qualitative data demonstrated that bimodal reading (simultaneously listening to an audiobook while following along with the printed text) serves as an effective mechanism to narrow the equity gap for special education and ELL students. Debbie recounted the experience of a student with cerebral palsy who was physically unable to hold a paper book; utilizing Bookshare's bimodal text-highlighting software on a computer was instrumental in allowing him to complete his coursework and earn his high school diploma. Carrie and Amber corroborated these benefits, noting that built-in dictionary functions, vocabulary look-ups and instant translation features allowed struggling readers and multi-language learners to resolve vocabulary barriers independently, minimizing the cognitive load associated with decoding and reducing the academic frustration frequently encountered with print-only formats.

Operational Advantages

Participating school librarians noted several operational advantages of digital collections which alleviate both the physical constraints of the library's physical footprint and the complex logistical barriers of content delivery. In terms of physical space, digital books eliminate traditional shelving constraints, allowing school librarians to curate a far more expansive and varied collection than their static facility could physically support. As one participant, Sam, observed, this digital capacity allows for a "nice diversity" and a "broad spectrum of options available to students" that would be physically impossible to house on physical shelves. However, the operational utility of digital formats extends beyond inventory capacity to resolve active logistical bottlenecks. In traditional print collections, meeting temporary, high-volume student demand for curriculum-relevant topics requires purchasing expensive, redundant copies that later sit unused on shelves. Digital licensing models–specifically unlimited simultaneous-use agreements–seamlessly resolve this challenge. As one elementary school librarian highlighted, "When all of third grade is studying biomes, everyone can access the same book."

This operational flexibility also translates into social and pedagogical advantages. On a social level, the digital format affords students increased reading privacy; Carrie observed that a struggling or visually-impaired student can use an iPad and headphones to blend in with peers, ensuring they "stand out less as different." On a regional logistical level, for school librarians who oversee multiple buildings—a common staffing reality in rural areas such as New Hampshire–digital licensing removes the burden of transporting physical sets of books between locations. Consequently, the digital format functions as a pedagogical force multiplier, extending the school librarian's instructional reach even when they are not physically present in a building.

Perception of the Ease of Use (PEOU) of digital books

School librarians participating in the study largely found digital books easy to use, attributing this to the technology's intuitive design and versatile access options. The findings regarding PEOU, however, revealed a complex picture, falling into three main categories: factors supporting high PEOU, specific challenges that diminish PEOU, and the mediating influence of prior experience and attitude.

Factors Supporting High PEOU

The school librarians interviewed provided strong support for the idea that digital formats are inherently easy to use. Four out of five interviewees indicated they found digital books easy to use, with Carrie representing the prevalent attitude when she stated, "I think they are so easy to use, and I wish I knew this my whole life. They're so easy to use, and honestly, you can't break them by trying out new things." This high PEOU is attributed to the intuitive nature of the reading applications, which are familiar to students. As Amber observed, the apps "are very intuitive, and that's kind of part of it when we're talking to students about how easy it is to use. It's just an app like all these other apps you use."

This high PEOU is supported by the versatility of access across devices and intuitive interface tools. Debbie spoke directly to the versatility of the digital format regarding accessibility and devices when she acknowledged that students find digital books "easy because they are accessible to any format." This includes the easy use of built-in features, such as the ability to "just highlight the word and look up so you're not pausing to understand the text." Amber cited digital tools, such as the "highlight tool," the "underlining tool," and the "note-taking tool," as making the process of organizing and finding information later "much easier."

Challenges and Mediating Factors

The technology is often intuitive, but its use becomes conditional on external variables, such as user attitude and negative prior experience. These realities can create friction and act as barriers, as evidenced by a survey respondent who noted that, despite the ease of use, the format remains "easy to use but not appealing," indicating a disconnect between PEOU and intrinsic motivation. Crucially, this disconnect exposes a fundamental paradox within the PEOU construct: a stark divergence between recreational interface intuition and academic task complexity. While basic platform mechanics–such as scrolling, page-turning, and opening files–are highly intuitive, the complex cognitive and operational demands of formal academic reading are not. When tasked with utilizing digital books for academic inquiry, students routinely struggle. This is why school librarians who responded "it depends" when asked whether they perceived digital books as being easy or hard to use suggested that PEOU hinges on whether users are technologically savvy.

Specifically, two of the 21 survey respondents explicitly utilized the phrase "it depends," while an additional two survey respondents highlighted that "some kids actually struggle with technology" or that applications are "hard for younger students to access." This developmental and technological friction was further elaborated during the interview phase by three of the five in-depth interviewees. Sam observed that despite students being viewed as digital natives, they "are not as good as they think they are" when navigating academic applications. Similarly, Amber–who also serves as a technology coordinator–noted that many students are "completely lost" when operating their school-issued devices because they prioritize instant gratification and often exhibit a disinclination to actively troubleshoot software interfaces. This reveals that user comfort with a device is highly task-contingent; students can intuitively interact with recreational apps, but remain completely unequipped to navigate the complex academic features of a digital text.

All five interviewees agreed that prior experiences with digital books, whether personal or academic, strongly shaped their perceptions of PEOU. For example, Ursula–the sole interviewee who categorized digital books as inherently hard to use–recounted a highly disruptive college experience in which she lost a digital textbook file and could not retrieve it. This loss established a persistent apprehension toward technical volatility and digital impermanence. Rather than experiencing reading applications as seamless or low-effort, Ursula perceived digital platforms as fragile, risk-prone systems where paid resources could instantly vanish. Consequently, this anxiety directly shaped her professional collection behaviors, leading her to favor print formats to ensure stability: "I'm just gonna buy a physical book, and then I can't lose it." This qualitative evidence demonstrates how a single, severe technical failure in a user's history can permanently degrade their PEOU, creating a lasting psychological barrier that biases them toward physical print.

Despite spending much of their time on devices, readers (both students and adults) often resist the effort required to learn a new reading application, prioritizing, as Amber noted when asked whether she perceived digital books as being easy or hard to use, and why, "instant gratification." Carrie also identified this resistance, observing that her students were not willing to "try something new." A reader's unwillingness to step out of their comfort zone can create a psychological barrier to ease of use, regardless of how intuitive the application is.

Beyond a simple reluctance to learn new applications, qualitative data from the interviews revealed that a primary driver of this low PEOU is an underlying passivity or unwillingness among students to engage in active troubleshooting or problem-solving. Amber described this behavior most acutely, leveraging her dual perspective as a school librarian and technology coordinator. She noted that many students struggle with basic troubleshooting because they lack the patience to navigate digital interfaces critically: "It's just that they're not willing to try to think critically about, like, where might I find the file button to print." Characterizing the typical student's internal barrier as an expectation of effortless convenience, Amber role-played their default perspective: "I think a lot of that is that roadblock … is that they just want it to work and they're not willing to figure out how it works." This aversion to effort was corroborated by Carrie, who observed that her middle school students often avoided engaging with advanced digital features–such as online highlighting and annotating–because they are "not practiced" with those tools and remain "wary to try that new step." Together, these accounts demonstrate that a user's reluctance to invest cognitive energy, such as navigating or troubleshooting a platform, acts as a powerful subjective constraint on its PEOU.

The Influence of Student Age and Grade Level

When asked whether student age and grade level influenced the adoption and use of digital resources, four out of five interviewees observed a distinct developmental and academic split between younger middle school students (grades 6-7) and older high school upperclassmen (juniors and seniors). For younger students, school librarians noted a high degree of technological open-mindedness driven by early exposure, but paired with a strong preference for physical books during leisure hours. Carrie observed this experimental disposition in her sixth graders, noting that they are "more adventurous and trying something new" compared to older cohorts, though they still heavily favor print for recreational reading. Ursula similarly remarked

that her sixth graders are the most active patrons in the school library checking out physical books, showcasing a clear boundary between platform familiarity and voluntary format preference. Amber, leveraging her dual experience across grades 7-12, observed that middle school teachers are much more active in academically integrating digital reading platforms. She attributed this relative comfort to a generational transition: younger students have "transitioned out of Raz Kids and Epic" in elementary school and are thus accustomed to digital interfaces, whereas seniors did not experience these early digital learning initiatives.

Conversely, school librarians reported that high school upperclassmen utilize digital resources far more frequently for academic tasks, but often resist adopting digital formats for recreational reading. Debbie reported that juniors and seniors turn to digital databases and electronic non-fiction resources "more quickly than the freshmen" due to more rigorous course expectations and high-stakes research requirements. However, both Debbie and Carrie identified a severe competency gap during these transition years. Debbie reported that incoming freshmen arrived in high school with "no competencies" in academic digital navigation, observing that post-pandemic underclassmen "basically skated through middle school under COVID" and missed out on foundational research skills. Collectively, these accounts demonstrate that student interaction with digital formats is highly contingent upon developmental age, academic expectations, and prior platform socialization.

Attitudes Toward Digital Books

In the TAM, a user's attitude toward using technology results from their internal perception of PU and PEOU, which, in turn, predicts their behavioral intention to use or reject that technology (Granić & Marangunić, 2019). Because this study seeks to understand the school librarian as the primary decision-maker, this section analyzes how participating school librarians' own attitudinal journeys–specifically their positive conversions or preemptive apprehensions–influence format acceptance within their professional practice.

Positive Attitude Shift: PEOU Enabling PU

Within the broader reading public, the transition to audiobooks often represents a positive attitude shift, as mobile technology allows readers to fit books into busy daily routines. This discovery of a key PEOU feature led to a massive increase in PU. In this study, a similar pattern of format acceptance emerged: 11 of 21 survey respondents reported a positive attitude shift toward digital books since the pandemic, and three of the five in-depth interviewees described themselves as audiobook "converts." For two of these interviewees, Carrie and Debbie, discovering a key usability (PEOU) feature–adjustable playback speed–led directly to a massive increase in their PU of the format. The ability to adjust playback speed completely changed Carrie's disposition toward the format. She said, "When I first started as a librarian it was print and only print...listening to audiobooks at the recorded speed has been painful, and knowing that I could change the speed was a life changer for me, and I get so much more reading done now, personally and professionally because of that, I can listen to it while I wash dishes, while I fold laundry, and I can't do either of those things while holding a print book. So my preference has changed to audiobooks." Debbie similarly noted that listening at regular speed had become

"painful" and that she now routinely listens at accelerated speeds (up to 2.25x) to maintain attention and process information efficiently.

Facing the challenges of new parenthood, Amber experienced a similar conversion when the format's PU (the ability to multitask) overcame their initial preference for print, "Speaking as a personal reader, I thought I was a much more visual reader. I didn't think I would ever like audiobooks...but now I'm a librarian, and it's like, well, that's part of my job. I need to be reading. I had to justify that. So now, audiobooks let me do it all. And I became a convert."

Negative Attitude and Rejection

Conversely, a negative attitude toward technology, often rooted in past experience or a low perceived PEOU, serves as a powerful barrier to acceptance. Ursula, who acknowledged struggling with technology in general, demonstrated a preemptive rejection of digital books when she said, "I'm really bad with tech in general…Digital reading is very new to me, so I don't necessarily know what's out there, and so that makes it harder. I think just as a practice and as a person, I tend to swing more toward physical print material."

This apprehension of technology rules out digital books because of perceived stumbling blocks that may or may not actually be present. In this study, two survey respondents and three of the five in-depth interviewees explicitly identified this psychological friction. Ultimately, one school librarian's survey response succinctly summarized the direct impact of these perceptions on usage when they said, "If a person does not really understand how to engage with a digital format, they do not invest in the very small amount of time and energy it takes to learn how to use the tools it takes to access digital books." As detailed in the subsequent section, this attitudinal divide governs school library collections, as a school librarian's personal comfort or discomfort with technology directly shapes their professional acquisition strategies.

Attitude and Collection Development: The Impact of Personal Preference

This study explicitly confirmed the relationship between a school librarian's personal attitude toward digital books and their professional decisions regarding collection development as a core factor. Quantitatively, 13 out of 20 survey respondents affirmed that their personal opinions influence their school library's purchasing decisions. The pre-service librarian's responses were excluded from questions regarding active collection procurement, as they did not hold purchasing power at the time of this study.

Qualitatively, interviews revealed a strong connection between individual experience and collection strategy. Within this cohort, Debbie and Carrie's personal conversions directly translated into positive purchasing strategies. Having successfully integrated adjustable audiobook speeds into their own professional and domestic routines, both librarians actively championed the acquisition of digital audio and ebook materials for their catalogs. Conversely, Ursula's self-described personal difficulties with technology resulted in a lower self-perceived PEOU, making it exceptionally challenging for her to systematically select electronic formats and biasing purchasing decisions toward more expensive physical print. The dynamism of these attitudes is also apparent, with 11 out of 21 survey respondents reporting their attitude had

changed since the pandemic, often recognizing the format's ability to provide "more equitable" and timely access. This evidence confirms that the school librarian's personal journey of acceptance significantly shapes the trajectory and depth of the school library's investment in digital collections.

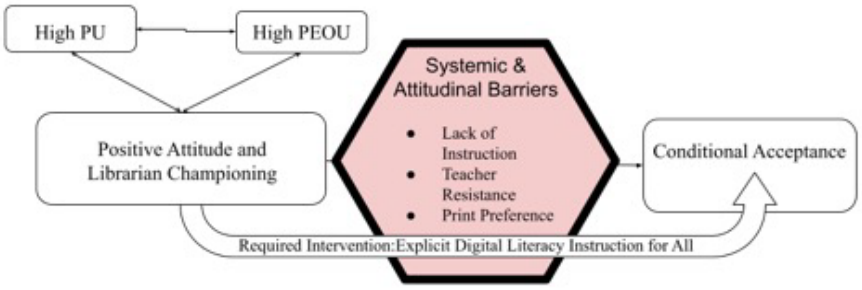
Discussion

The study's findings, when synthesized through the TAM, paint a complex picture of digital book adoption in a subset of New Hampshire schools. The data strongly confirm the intrinsic value of the format, with surveyed school librarians overwhelmingly reporting high PU, citing immediate access, advanced searchability, and critical accessibility features as superior functional benefits. Furthermore, four out of five interviewees reported a high PEOU due to the intuitive nature of reading applications and cross-device versatility.

To visually and theoretically synthesize how these constructs interact within the school library ecosystem, we present the Conceptual Model of Conditional Digital Book Acceptance by K-12 School Librarians (Figure 2). This model serves as a visual roadmap for the thematic implications analyzed in the subsections below.

Figure 2

Conceptual Model of Conditional Digital Book Acceptance by K–12 School Librarians



As illustrated in Figure 2, high PU and high PEOU successfully generated a positive attitude, prompting participating school librarians to champion the digital format. However, the model demonstrates that technology acceptance in K-12 environments is not a linear projection of user attitudes or format utility. Instead, the school librarian's behavioral intention to fully integrate digital books is systematically bottlenecked by a central hexagon of "systematic and attitudinal barriers" that consist of (1) a developmental lack of explicit instruction, (2) classroom teacher resistance, and (3) a deeply entrenched student print preference. Our model posits that a targeted intervention–namely, explicit digital literacy instruction for all students and teachers–is required to bypass this bottleneck and transition the school community toward successful, conditional acceptance.

Unpacking these three distinct barriers, alongside the physical and socio-economic realities of rural school districts, provides the necessary context to understand why digital books remain largely marginalized, underutilized, or restricted to mandatory academic contexts on the school

library floor. The following four subsections leverage Figure 2 as an analytical lens to unpack these dynamics.

Additionally, it is critical to contextualize these high PU scores within the time-sensitive nature of the data collection. Conducted in late 2022, these perceptions may be partially inflated by the pandemic's recent memory, a period when school librarians had no alternative to digital access. This suggests that some reported acceptance may have been a reactive byproduct of crisis necessity rather than a permanent shift in pedagogical philosophy. As the emergency recedes, the format's forced utility faces renewed scrutiny compared with traditional print.

Implication 1: Contextual Usefulness and Informational Reading

The study confirmed that digital books offer high PU, specifically through the functional affordances of searchability and instantaneous access. Additionally, in the rural context of northern New Hampshire, digital procurement mitigates the logistical latency inherent in physical distribution. By eliminating the waiting period associated with shipping, digital formats preserve continuity of learning and reading, and prevent the dissipation of student engagement. Importantly, both prior literature and the empirical data from this study indicate that medium preference is not absolute but contingent; the specific objective of the reading task dictates whether the digital or print medium is preferred (Budnyk et al., 2021; Mizrachi, 2015; Rivers, 2016). Our survey findings revealed a stark contextual division, with school librarians noting that students readily adopt digital tools for information–seeking and research tasks while fiercely preserving physical print for leisure reading. This contingency was qualitatively verified in our interviews. Sam reported that while students appreciated the efficiency of navigating ebooks for informational research, they consistently insisted on physical books for recreational reading. Similarly, Debbie noted that while upperclassmen turn to digital resources more quickly to navigate academic coursework, they reject ebooks for pleasure reading. Rather than a simple binary choice, technology acceptance in K-12 school libraries operates as a fluid negotiation based on task-specific needs.

Participants consistently noted that the high PU of digital books is evident during informational tasks, where features such as "find" commands and hyperlinking allow for efficient skimming. Conversely, PU for sustained, deep reading was lower, consistent with existing literacy research (Baron, 2021; Budnyk et al., 2021). This functional distinction requires school librarians to provide explicit instruction in digital reading strategies tailored to specific purposes. From our analytical perspective, such proactive instruction is especially vital during transitional academic stages–such as the transition to middle and high school–where the complexity of informational texts increases. Although the interview protocol did not explicitly query these transitional periods, participants volunteered critical developmental evidence supporting this recommendation. Specifically, while younger middle school cohorts show greater attitudinal openness to experimenting with digital interfaces, they face a severe systemic bottleneck when transitioning to screen-based state standardized testing without prior instruction in digital annotation. Similarly, Debbie observed that incoming high school freshmen often lack essential digital and academic competencies, yet upperclassmen are expected to turn quickly to electronic resources and complex databases to navigate high-stakes coursework. Consequently, we argue

that embedding explicit digital reading instruction in these transitional bridge years is a necessary pedagogical intervention to support student technology acceptance.

We believe that, while school librarians are theoretically positioned as the digital resource leaders in their buildings, the assumption that they universally possess the technological confidence, self-PEOU, or formatting comfort to spearhead these digital literacy initiatives represents a significant organizational blind spot. As our findings reveal, school librarians themselves are deeply divided; some, such as Ursula, experience substantial personal anxiety regarding technological volatility and explicitly struggle with digital interfaces, which subsequently biases their collection development decisions away from electronic media.

Therefore, while the pedagogical responsibility for teaching "reading for purpose" is shared among school librarians and classroom educators, school districts cannot simply expect school librarians to act as automatic champions of digital reading. Rather, establishing a collaborative instructional model requires first addressing the professional development needs and format anxieties of the school librarians themselves, ensuring they are systematically supported and upskilled before they are tasked with partnering with classroom teachers to integrate digital reading and annotation strategies directly into daily curricula.

However, because our qualitative interview cohort lacked representation from elementary school librarians, these development insights and recommendations must be framed primarily within middle and high school contexts. While the initial survey captured diverse grade-level representations–including 11 elementary school roles–no elementary school librarians participated in the follow-up semi-structured interviews. Therefore, while we hypothesize that proactive digital literacy scaffolding is beneficial across all developmental stages, further research is required to determine whether these transitional dynamics, platform-transition struggles, and collaborative instructional partnerships operate similarly within elementary school libraries.

Implication 2: Challenging the "Digital Natives" Myth

While the reading applications themselves were deemed highly intuitive under recreational conditions, contributing to high baseline PEOU for leisure tasks, our findings reveal a critical analytical distinction: basis interface intuition does not equate to academic efficacy. Successful adoption depends heavily on a user's technical competence to execute complex cognitive operations. Indeed, a major contribution of this study is resolving the apparent paradox of why an "inherently intuitive" technology can simultaneously prove academically paralyzing to students. The widely accepted concept of students as "digital natives" is empirically unsupported in academic contexts. To capture this deficit, we suggest instead the concept of "digital transiency," a state in which users demonstrate high superficial familiarity with commercial interfaces but lack the deeper operational competencies required for formal academic tasks. All five in-depth interviewees identified this pattern, and several survey respondents corroborated it, observing students operate primarily as transient users who navigate platforms without developing functional mastery of their academic reading interfaces.

This paradox manifests because the physical ease of basic screen interaction (e.g., swiping or clicking) creates a false illusion of competence that quickly breaks down under academic reading purposes. Under peer-to-peer or recreational conditions, student comfort is high because the cognitive demand is low; however, when transitioned to academic environments, the PEOU of digital formats sharply degrades because students are forced to perform advanced digital annotation, cross-page synthesis, and proactive troubleshooting–strategies that are neither intuitive nor self-taught.

School librarians who dual-operate as technology coordinators observed this gap most acutely. As detailed in our findings, Amber remarked that despite their constant personal screen time, students often struggle to operate basic hardware and software interface menus. She attributed this to an expectation-based bottleneck in which students prioritize instant convenience over active problem-solving, describing their default mindset as wanting the technology to work without investing the effort to understand it. Sam similarly challenged the digital native label, noting that students exhibit immediate anxiety when asked to transition from commercial apps (like YouTube) to academic databases.

This lack of technological fluency is further compounded by developmental and educational gaps. Debbie reported that post-pandemic underclassmen navigated their middle school years amid COVID-19 disruptions without establishing foundational academic practices, entering high school lacking essential baseline capabilities in digital research. Furthermore, Carrie's observations highlight a critical policy-practice disconnect in modern curricula: while students are instructed using paper-based methodologies, they are evaluated on screen-based standardized assessments. This misalignment represents a severe systemic oversight, as school systems mandate digital testing without embedding the corresponding digital reading and annotation strategies into daily classroom instruction. Consequently, assuming users possess intuitive digital literacy severely degrades the PEOU of digital book formats.

Implication 3: Institutional Resistance to Acceptance

Within the TAM framework, classroom teachers can function as a prominent negative external variable that governs the perceived acceptability and utility of digital formats. When teachers do not categorize digital engagement as "valid" reading, it creates an immediate bottleneck for student adoption. Debbie expressed the frustration inherent in this institutional reticence, noting that her humanities department head and teaching staff actively contest the academic legitimacy of screen-based literacy. This classroom teacher skepticism–documented by three out of five interviewees and multiple survey respondents–acts as a powerful discouraging factor. As detailed in the Results section, even when a school librarian reports high PU and recognizes the format's functional benefits, anticipating that digital materials will go underutilized or face active classroom bans due to device-monitoring concerns can dampen their motivation to proactively expand digital holdings.

To address this, we recommend that school librarians move beyond merely defending the format and instead facilitate targeted professional development (PD) for classroom teachers. However, this advocacy-oriented recommendation contains a critical institutional bottleneck: school librarians cannot successfully facilitate PD for teaching staff if they themselves lack the

technological confidence, high self-PEOU, or personal format acceptance required to champion these resources. The qualitative evidence from our study demonstrates that school librarians are not a monolithic group of tech-fluent advocates; some, like Ursula, suffer from digital apprehension that directly deters active engagement with virtual curation. To resolve this capacity gap, school districts must implement a two-tiered instruction coaching model. First, districts mut provide targeted professional development, technical scaffolding, and peer-mentoring opportunities directly for school librarians to standardize their digital reading competencies and alleviate personal technology anxieties. Once the school librarian's own PEOU is stabilized, they can confidently facilitate targeted PD that empowers teachers to manage the technical logistics, such as single sign-on, digital annotation features, and basic troubleshooting, within their own instructional spaces. By equipping staff with these competencies, the school librarian shifts from being viewed as a "tech-support specialist" to a collaborative instructional partner. This approach effectively embeds digital reading into the teacher's classroom toolkit, enhancing both PU and PEOU through a shared pedagogical framework.

Implication 4: The Enduring Preference for Print

The study confirms other researchers' findings about the persistent preference for physical books among students, teachers, and school librarians (Dawkins & Gavigan, 2019; Loh & Sun, 2019; Mizrachi, 2015; Vallée, 2020, 2023), a sentiment that may drive rejection of digital formats. This persistent format bias is deeply rooted in the virtual nature of digital media, which lack the tactile tangibility and spatial stability of a physical volume (Kosch et al., 2021; Mangen, 2008; Rivers, 2016). Rather than a mere aesthetic preference, the "emotional distance" described by participants like Ursula represents a psychological detachment that occurs when readers are deprived of physical progress indicators. Cognitive mapping in reading relies heavily on the sensory feedback of holding a text and physically turning its pages. When these tactile markers are replaced by uniform scrolling or pixelated screen transitions, the reader's spatial orientation is disrupted, leading to disconnection and reduced satisfaction documented in both our qualitative and survey data. Consequently, a profound tension emerges between the internal cognitive mapping readers desire and the external physical spaces available to house collections.

These emotional attachments, however, frequently conflict with the realities of rural education, particularly in New Hampshire. The state's tradition of local control and geographically dispersed districts often requires a single school librarian to manage collections across multiple, remote buildings. In these smaller or older facilities, digital collections enable school librarians to maintain a breadth of literature and nonfiction that would be impossible to house physically.

Furthermore, digital formats also alleviate the logistical burden for itinerant school librarians, who serve several schools simultaneously. By providing a single digital collection, school librarians can ensure that students in different buildings have constant access to resources, even on days when the school librarian is physically stationed at a different campus miles away. However, rather than automatically ensuring state-wide equity, localized digital adoption serves primarily as a strategy to mitigate internal geographical and logistical barriers within a split-site district. Across New Hampshire's decentralized, local-control landscape, true equity of literary access remains profoundly constrained by stark inter-district budgetary disparities. While school

librarians in well-funded districts can leverage robust budgets to build extensive electronic libraries, their counterparts in smaller or under-resourced communities face severe funding limitations that restrict their ability to establish or maintain digital collections. Consequently, digital adoption enhances access within individual districts; bridging the wider socioeconomic equity gap requires macro-level systemic interventions–such as a state-wide centrally managed collection or a shared consortium model–to put learners in under-resourced communities on an equal footing with those in wealthier districts

Ultimately, acceptance of digital books seems conditional. While the technology demonstrates high intrinsic PU and PEOU, low user competence, negative prior experience, and institutional bias may block the realization of these benefits. As these implications suggest, we believe the success of digital book adoption comes down to explicit instruction and use for both students and teachers. Better knowledge and skills in reading digitally could alleviate teacher and student concerns, improve technological skills that carry over into other areas (such as state and SAT testing), and enhance readers' comfort with digital books by providing more options for comprehensive reading.

Conclusion

This study successfully applied the TAM to explore a localized cohort of New Hampshire school librarians' perceptions of digital books, confirming the format's inherent strengths while uncovering notable systemic and attitudinal barriers within this participant group that warrant further research to confirm on a wider, generalizable scale. Although the instruments did not employ direct, leading prompts about "barriers" (see Appendix A and C), these obstacles emerged inductively from participants' open-ended reflections on usability, student preferences, instructional roles, and collection constraints.

By employing the original 1989 TAM and retaining the "Attitude" construct, this study has made a critical theoretical contribution. It has demonstrated a vital nuance that modern, streamlined iterations of the model (such as TAM-R) often obscure: a school librarian's positive attitude–their personal decision to champion a technology–does not automatically translate into behavioral intention or widespread user acceptance. Instead, within K-12 educational environments, individual technology acceptance is heavily negotiated against, and mediated by deeply entrenched institutional and cultural realities.

Ultimately, our findings reveal that despite widespread school-issued device saturation, digital books currently occupy a highly restricted, non-voluntary niche in the student reading ecology. They operate primarily under "grudging utility"–functioning as transactional tools of academic necessity rather than platforms for leisure reading. To dismantle these barriers and achieve genuine multidimensional conditional acceptance, school systems must pivot away from a model of mere device distribution and toward a collaborative instructional framework that models digital reading and annotation as core academic competencies across all disciplines. Explicitly teaching these digital literacy strategies not only alleviates student and teacher hesitations, but also equips learners with the operational competencies required to navigate high-stakes, screen-based standardized assessments, such as state and SAT exams.

Furthermore, addressing these barriers requires recognizing that digital equity is fundamentally tied to local socioeconomic resources. While digital books can expand localized access, bridging the wider systemic equity gap in under-resourced communities demands macro-level interventions, such as a state-wide centrally managed collection or a shared library consortium model. By pairing shared institutional resources with shared pedagogical responsibility, educational systems can transition digital formats from transactional tools of survival into equitable, deeply integrated vehicles for learning.

To build upon the findings of this study and further map the shifting landscape of K-12 digital literacy, we propose a multi-faceted agenda for future research. This agenda is structured around four primary research domains: explicit instruction, digital competence, and PEOU; institutional resistance and teacher attitude change; mitigating print bias in collection development; and systemic, macroeconomic, and developmental variables.

Explicit Instruction, Digital Competency, and PEOU

Our finding that participating school librarians systematically perceive students as struggling with digital transiency highlights a critical need for empirical research into effective instructional strategies that build genuine digital competency and enhance PEOU. Specifically, future studies should investigate the longitudinal effects of school-wide digital reading and annotation curricula on student performance during high-stakes, screen-based standardized assessments (e.g., state testing, SAT, and AP exams). Measuring whether explicit digital literacy instruction directly mitigates testing anxiety and improves reading comprehension scores on screens is a necessary next step for K-12 educational technology research.

Institutional Resistance, Teacher Attitude, and Acceptance

The strong qualitative evidence of classroom teacher resistance and bias against digital reading necessitates a targeted investigation into changing institutional attitudes. Research should measure whether professional development designed by the school librarian to demonstrate the functional equivalence and pedagogical benefits of digital book features (e.g., annotation, translation) successfully shifts classroom teacher attitudes toward digital reading. Additionally, there is a need to understand the impact of administrative action. How would specific school or district-level policies mandating the use of digital books for defined purposes (e.g., nonfiction research, accessibility accommodation) over one full academic year impact teacher and student acceptance of the format?

Attitude, Print Preference, and Collection Development Bias

Our analysis confirmed that a school librarian's personal attitude can influence their professional collection development decisions, leading to a bias toward print. Further study with a larger, random sample of school librarians from more states would be required to mitigate such a bias by examining what specific strategies (e.g., blind purchasing, mandatory digital-to-print ratios) can be implemented to successfully decouple the school librarian's personal preference for print

from their professional purchasing decisions, with the goal of increasing equitable access to digital resources.

Finally, research should investigate whether features that enhance the physical experience of digital reading (e.g., "page-turn" animations, visual shelf displays) can reduce "emotional distance" and increase preference for digital books among students and school librarians who currently favor the tangibility of print (Budnyk et al., 2021; Dawkins & Gavigan, 2019). Specifically, future studies should evaluate both software-level features (such as skeuomorphic virtual 3D bookshelves and realistic page-turn animations within reading applications) and physical-space integrations (such as interactive touchscreen kiosks and electronic signage displays showing rows of virtual book jackets that students can browse and download via QR codes). Determining whether these sensory-mimicking tools can bridge the physical-to-digital gap and make digital collections visible on physical library floors is a critical step for future K-12 technology acceptance research.

Systemic, Macroeconomic, and Developmental Variables

While school librarians' attitudes represent a critical facet of technology integration, a holistic understanding of digital equity in K-12 education requires examining the broader macro-level variables governing the school system. Further research should expand outward to address the four specific subtopics, as shown in Table 3.

Table 3

Systemic, Macroeconomic, and Developmental Variables

Macroeconomics of digital licensing	The influence specific vendor ecosystems and their respective licensing models have on school librarians' purchasing attitudes and overall collection equity.
Technical infrastructure	The pedagogical and logistical impact of rural broadband limitations on digital collection utility in geographically isolated school districts.
Avenues of pandemic post-crisis recovery	A longitudinal follow-up study is necessary to determine if the shifts in digital spending and attitude documented in late 2022 were transient artifacts of pandemic survival strategies or represent a permanent evolution in library collection development as schools have moved further away from crisis management.

Parsing “conditional acceptance”	Moving beyond the binary of “acceptance versus rejection” to examine how acceptance fluctuates based on reading purpose (informational versus recreational), platform interoperability, development literary stages (elementary versus secondary, and text typography such as short-form articles versus long-form narrative cognitive endurance.

Ultimately, securing evidence-based answers across these four domains will provide the empirical guidance necessary for school librarians to refine collection strategies, optimize instructional protocols, and remain responsive to the evolving technological needs of their communities.

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Appendix A
Survey Questionnaire
Image of the informed consent document at the top of the survey

I am conducting interviews with school librarians in elementary, middle, and high school as well as pre-service school librarians to examine New Hampshire school librarians' opinions concerning digital books. Your participation in this interview is voluntary and you may decide to stop at any time without penalty, or you may choose not to answer any of the questions. All responses are anonymous. This survey should not take more than 10 minutes.

If you have any questions or concerns about the nature of this research or the interview please contact Etienne Vallee (evallee@sau45.org).

By continuing the interview, I acknowledge that I am at least 18 years old, have read the above information, and provide my consent to participate under the terms above.

I am asking you to consent to participate in this study. If you "Agree", you acknowledge that you understand the purpose of this study and that you voluntarily choose to participate in this interview. You do not have to answer any or all questions. Note that direct quotes will be included as part of the analyzed data. By choosing "Disagree," you acknowledge that you do not wish to participate in this study. Thank you for your time and participation.

1. Do you wish to participate in this study by completing this survey?
    a. Agree - Go to question 2
    b. Disagree - go to Question 14

2. What is your role? Identify all that apply
    a. Elementary school librarian?
    b. Middle school librarian?
    c. High school librarian?
    d. Pre-service school librarian?

3. Do you perceive digital books as being easy or hard to use? Why?

4. What is the usefulness of having digital books in your collection?

5. Does your personal opinion of digital books influence your collection development?
    a. Yes - Go to question 6
    b. No - Go to question 7

6. What impact does your personal opinion of digital books have on your collection? Are you more likely or less inclined to purchase digital books for your collection?

7. Has your attitude concerning digital books in your school library collection changed since the pandemic?
    a. Yes - Go to question 8
    b. No - Go to question 9

8. How has your attitude concerning digital books in your school library collection changed?

9. Do you notice a difference in the way your students "read" digital books (ebooks and audiobooks) compared to print books?
    a. Yes - Go to question 10
    b. No - Go to question 11

10. What difference(s) have you noticed in the way your students "read" digital books (ebooks and audiobooks) compared to print books?

11. Are there any questions I should have asked about digital books?

12. Would you be interested in participating in an interview to discuss these questions in more detail?
    a. Yes - Go to Question 13
    b. No - Go to Question 14

13. Please leave your email address so that I can contact you.

14. Thank you for participating in this survey!

Appendix B
Recruitment Script

Recruitment script - to be distributed on the New Hampshire School Library Media Association's listserv on three separate occasions (September 12, 2022, September 26, 2022, and October 11, 2022)

Hello, great New Hampshire school librarians!

I am hoping to take advantage of this great group's knowledge to help me with research I am conducting on New Hampshire school librarians and their perceptions of digital books. Details are below if you think that you'd be interested in participating.

__Topic__: New Hampshire School Librarians' Perceptions of Digital Books
__Estimated Timeline__: September to October, 2022
__Estimated Time Commitment__: Approximately 10 minutes to complete an open-ended survey, and possibly an additional 30 minutes to participate in an interview that will be recorded and transcribed if selected.

All participation is completely voluntary and may be terminated at any time. The interviews will be anonymous and no personal information will be collected, unless you wish to participate in the interview. There are a total of nine questions, with the first question being an informed consent choice allowing participants to agree or disagree to participate in the survey and the second question being a demographic question. The remaining five open-ended questions will collect qualitative data. Direct quotes will be included as part of the analyzed data.

If you would be interested in participating in these interviews, please click on this link, which will take you to a Qualtrics survey. Note that this survey is intended only for school librarians who work in the State of New Hampshire.

Thanks in advance for your generous donation of time helping me better understand the acceptance of digital books in New Hampshire!

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Appendix C
Interview Questions

"Thank you for agreeing to speak with me today. The purpose of this interview is to discuss how you perceive digital books in terms of usefulness and usability. Specifically, we are interested in exploring whether your perceptions of digital books influence your school library collection development. We'd like to remind you that to protect the privacy of interviewees, all transcripts will be coded with pseudonyms. This interview will last about 30 minutes, and we will videotape the discussion to make sure that it is recorded accurately."

Introductory Questions (to know better the participants and their work environment)

1. Do you have any questions for us before we begin?

2. Do you agree to participate in this interview?

3. What is your role as a school? Are you an elementary school librarian, a middle school librarian, a high school librarian, or a pre-service librarian?

4. Does your personal opinion of digital books influence your collection development? Why or why not?

5. Do you have a preferred digital book platform? Why?

6. What impact does your personal opinion of digital books have on your collection? Are you more likely or less inclined to purchase digital books for your collection?

7. Has your attitude concerning digital books in your school library collection changed since the pandemic? How has your attitude concerning digital books in your school library collection changed?

8. What reading format do you think your students prefer? Why?

9. Does your students' age influence the use of digital resources?

Main Interview Questions

10. Do you perceive digital books as being easy or hard to use? Why?

11. What is the usefulness of having digital books in your collection?

12. Do you notice a difference in the way your students "read" digital books (ebooks and audiobooks) compared to print books? If yes, what difference(s) have you noticed in the way your students "read" digital books (ebooks and audiobooks) compared to print books? If no, do you think there are differences between reading digitally and reading print?

13. Do you as a school librarian teach how to read digitally? If yes, how do you teach digital reading? If no, should school librarians teach how to read digitally? Why or why not?

The next questions were suggested by fellow librarians during the survey part of this study.

14. What effect do digital books have on the equity gap?

15. What influence do digital books have on inclusivity in our collections?

16. How can digital books be used best to support the curriculum?

17. When working with ELL students, how can digital books enhance or hinder their language acquisition?

18. Does the cost of digital books compared to print books affect your decision to purchase them for your collection?

19. Are there any questions I should have asked about digital books that we didn't?

Thank you for participating in this survey!

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