NOTES ON OPERATIONS

Streamlining Invoice Management in Academic Libraries

A Case Study Using ClickUp

Devon Ellixson and Russell Michalak

Managing invoices and contracts remains a persistent challenge in academic libraries, especially in lean-staffed environments where decentralized workflows increase the risk of errors and delays. This case study documents how a small, master's-level institution transitioned from fragmented manual processes and a partially customized Notion workspace to ClickUp, a centralized project management platform. Unlike Notion, which required extensive customization and frequent retraining of student workers, ClickUp offered structured, out-of-the-box workflows that automated routine tasks, standardized documentation, and improved vendor communication with minimal onboarding. The shift reduced invoice processing time by 50 percent and eliminated duplicate payments, strengthening vendor trust and operational accountability. By comparing ClickUp with manual spreadsheets, integrated library system modules, and electronic resource management tools, the study highlights trade-offs between flexibility, scalability, and staff capacity. Practical recommendations are provided for libraries—particularly underresourced institutions—seeking low-overhead digital solutions that enhance efficiency, accuracy, and sustainability in financial workflows.

Introduction

Academic libraries—regardless of size or vendor base—often struggle with invoice processing when workflows are decentralized and rely on manual coordination across multiple systems. At our library, this challenge was especially pronounced. Documents moved through email threads, spreadsheets, vendor portals, and disconnected institutional units such as the college's central business office. Prior to adopting ClickUp, we experimented with Notion, a flexible all-in-one workspace, to track invoices, contracts, approvals, and helpdesk tickets. Yet despite these efforts, both physical and digital materials continued to slip through the cracks. Invoices arrived through unpredictable channels—the campus helpdesk, SpringShare's Customer Relationship Management (CRM) software, individual inboxes, and even postal mail. Some were addressed to the business office, others to the receptionist, current librarians, librarians who had moved on, a retired librarian, a deceased librarian, and even student worker interns—wherever vendors believed they might get a response.

The absence of a unified intake process and consistent documentation workflow for invoices and contracts led to delayed payments, miscommunications, and administrative bottlenecks. These inefficiencies not only strained vendor relationships but also slowed progress on student success initiatives, artificial intelligence (AI) literacy efforts, and faculty development programs—areas that depend on timely collaboration and relationship-building with key stakeholders.

Devon Ellixson (devonellixson@gmail.com) is Library Intern at Goldey-Beacom College and **Russell Michalak** (michalr@gbc.edu) is Director of Library and Archives at Goldey-Beacom College, http://orcid.org/000-0003-0961-8926.

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This case study is set at a small, master's-level institution with approximately 1,500 students and an emerging Hispanic-Serving Institution (HSI) designation. The library operates with one full-time librarian supported by student workers and occasional interns. For context about the staffing, management, and workflows of the library described in this study, as documented in papers by Monica Rysavy and Russell Michalak, pandemic-era budget cuts, attrition, and hiring freezes left operations fragile, making routine processes highly vulnerable to disruption without integrated workflows in project management software.[1] In this lean environment, student assistants often assumed responsibilities typically reserved for professional staff, making sustainability and consistency a constant challenge.

In this paper, we describe our library's transition from a fragmented, manual invoice system to a streamlined, automated workflow using ClickUp. It examines the challenges that prompted change, the decision-making and implementation process, and the measurable outcomes. By sharing this experience, we aim to provide a roadmap for other academic libraries—particularly small or underresourced institutions—seeking to modernize financial workflows, reduce errors, and strengthen cross-departmental coordination through agile, technology-enabled solutions. This case study focuses specifically on the invoicing workflow while noting that the library has gradually adopted ClickUp for additional operational areas (e.g., approvals and helpdesk coordination). The scope is limited to invoicing in order for implementation choices, outcomes, and lessons learned to be presented in depth.

Literature Review

The literature on project management and invoice workflows in academic libraries underscores the critical role of adopting modern technologies to address inefficiencies and enhance operational capabilities. Kayla Kipps and Allison Jones explore cloud-based tools like Trello and Google Drive, emphasizing their collaborative and scalable features in managing collection workflows.[2] This complements Robert Alan's earlier identification of the limitations in manual workflows, particularly the lack of centralization, which often results in errors and inefficiencies.

Managing invoices and vendor relationships remains a complex and time-intensive process for academic libraries. Manual tracking methods, as highlighted by Alan, often lead to delayed payments, errors, and strained vendor relationships.[3] Patrick Kelsey, along with Kipps and Jones, further elaborates on the strain these inefficiencies place on library staff, disrupting workflows and the library's ability to meet community needs.[4] William Midgley and Kavita Mundle build on these findings, showcasing the scalability and error reduction achieved through automated systems like Alma.[5] Martha Stoddard, Ben Gillis, and Peggy Cohn demonstrate that applying Agile principles in libraries fosters cross-functional teamwork, transparency, and adaptability, directly addressing inefficiencies comparable with those found in invoice and vendor management workflows.[6]

The evolution of tools like ClickUp reflects broader trends in project management methodologies, particularly the transition from rigid approaches like the waterfall model to more dynamic frameworks such as Agile. Joy Perrin argues that libraries benefit from Agile principles, which prioritize adaptability

and collaboration, aligning well with the frequent shifts in user needs.[7] Similarly, Samantha Schmehl Hines emphasizes the distinction between projects and routine tasks, advocating for a systems-thinking approach to manage library initiatives effectively.[8] These insights align with Joy Perrins's findings on the utility of ClickUp, a tool that integrates Kanban principles to visualize workflows and optimize resource allocation.[9]

Communication also emerges as a critical component of successful project management in libraries. Robert Alan et al. discuss the implementation of web-based tracking systems such as Pennsylvania State University's ERLIC2, which centralizes information related to access, authentication, licensing, and issue resolution.[10] These systems, along with tools like Google Drive, enhance transparency and team collaboration, as highlighted by Kipps and Jones.[11] Kristen Wilson further underscores the importance of integrated communication tools in improving cross-departmental workflows.[12] Echoing Wilson's emphasis on integrated communication, Stoddard, Gillis, and Cohn found that Agile tools such as Kanban boards and iterative stakeholder reviews enhanced transparency and cross-departmental collaboration.[13]

Visualization tools such as Tableau Public, discussed by Kipps and Jones, and features such as Kanban boards in ClickUp provide libraries with the ability to identify bottlenecks and analyze trends.[14] These tools align with Kelsey's findings that structured workflows enhance operational consistency and resource management.[15] By visualizing processes, libraries can improve decision-making and ensure timely task completion.

The implications of these advancements extend beyond operational efficiencies. Delays in invoice processing or payment errors can disrupt access to essential resources, directly affecting students and faculty. Alan and Barbers et al. highlight the critical role of data-driven decision-making in maintaining uninterrupted access to resources, a sentiment echoed in Kipps and Jones's advocacy for cloud tools that foster accessibility and transparency.[16]

Integrating change management principles with project management tools like ClickUp in academic library workflows reflects the convergence of modern methodologies with technological innovation. These tools enable libraries to address inefficiencies, streamline communication, and enhance scalability. As Hines and Perrin suggest, applying Agile principles and visualization techniques ensures libraries remain adaptable and focused on their mission to support evolving user needs.[17] The collective insights of Alan et al., Wilson, and Jones and Kipps illustrate the transformative potential of project management software, offering a pathway for libraries to achieve sustainable operational excellence.[18] In line with Hines's systems-thinking approach, Stoddard et al. stress that adopting Agile requires cultural change within libraries, underscoring that tools such as ClickUp succeed when paired with shifts toward resilience, adaptability, and iterative learning.[19]

Challenges Before Adopting the Project Management Software, ClickUp

The impetus for changing our invoice and contract processes from system to system—finally landing on ClickUp—was the accumulation of persistent, compounding challenges that hindered our daily operations.

Before adopting automated workflow solutions in Notion and later ClickUp, our library relied on a patchwork of spreadsheets and Microsoft SharePoint to manage invoices for electronic resources, print materials, vendor contracts, and operational issues. This decentralized approach created recurring problems for a lean staff and placed the entire administrative burden on the library director. In such a small-staff environment, the lack of centralization not only undermined collaboration but also diluted accountability and slowed problem resolution.

Manual entry into multiple spreadsheets added another layer of inefficiency. Although staff generally entered data accurately, the lack of standardized templates and fragmented reporting introduced errors. Double payments, overlooked invoices, and incorrect amounts occurred, and scattered documentation across emails and folders forced time-consuming cross-referencing. These inefficiencies disrupted budget planning and hindered real-time assessment of financial obligations.

Frequent policy changes and shifting invoice submission forms compounded the confusion, often introduced without clear communication with staff. High turnover among student workers further strained the system; each new hire had to be trained on a complex, inconsistent workflow. This retraining diverted time from more valuable responsibilities and created ongoing inefficiencies, as learning new systems slowed progress. Even after training, manual spreadsheet entry remained error-prone and absorbed hours that could have been better dedicated to resource management, user services, or strategic planning.

As the library's vendor base and collections expanded—from about 92,000 full-text items with eight vendors in 2010 to nearly one million items with forty-two vendors at the time of writing—risks of error multiplied, particularly during peak invoicing periods such as summer, when student support was minimal. With manual workflows consuming so much time, staff were diverted from core responsibilities.

Compounding the issue, the library's integrated library systems (ILSs; SirsiDynix Symphony through 2017, now KOHA) offered financial management features that remained underutilized. This was not due to system limitations but to internal constraints: a skeleton staff, limited permissions, and no dedicated administrative expertise. As a result, the ILS's potential to streamline invoice management remained untapped.

Together, these challenges underscored the urgent need for a centralized, scalable workflow. To address this, the library sought a project management platform capable of real-time task tracking, automation, and integrated documentation—ultimately finding a sustainable solution in ClickUp.

Comparing and Choosing Tools for Library Operations

When examining potential solutions for managing invoices and contracts, the library considered a range of tools: manual spreadsheets, collaborative platforms like Notion, project management tools like ClickUp, and specialized systems such as EBSCO's Electronic Resource Management (ERM) and Koha's

ILS with an ERM module. Each option offered unique strengths and limitations, revealing clear trade-offs between flexibility, automation, and specialization, as detailed in table 1.

Manual spreadsheets were the starting point. They are familiar, low cost, and accessible, but lack automation and structure. Data entry, reconciliation, and reporting require manual work.

Notion offered more organization and flexibility than spreadsheets, particularly for documentation, note-taking, and linked databases. Its workflows required significant customization, however, and automation was minimal. The learning curve was steep for student workers, and they required frequent retraining. Reporting capabilities were also limited, in that we had to export and reformat the data. Although helpful for knowledge sharing and small projects, Notion did not scale well to meet the demands of financial and operational management.

ClickUp represented a significant improvement, combining usability with automation. Out-of-the-box templates reduced setup time, while built-in task assignments, reminders, and workflow routing centralized invoice management. Its dashboards provided real-time financial and operational reporting, making accountability clearer and more consistent. ClickUp's intuitive design also reduced the training burden for student workers and new staff, a key benefit in a high-turnover environment. As the library's collections and vendor relationships grew in number and complexity, ClickUp scaled effectively, supporting both efficiency and collaboration.

EBSCO ERM was designed specifically for managing the full life cycle of electronic resources. Built on the open-source FOLIO platform, it integrated agreements, licenses, invoices, finances, and holdings into a single environment. The system's automation extended beyond internal workflows to automatically update catalogs, discovery tools, and link resolvers, ensuring users had immediate access to resources. EBSCO ERM excelled in scalability and depth of functionality, although it requires considerable administrative expertise and staffing to fully realize its potential.

Koha ILS with ERM offered another specialized alternative. As a full-featured ILS with an ERM module, Koha provided unified management of both physical and electronic resources. The ERM module supported agreements, licenses, usage reports, and holdings, while the broader ILS framework supported acquisitions, cataloging, and circulation. This integration reduced duplication of effort and allowed staff to manage workflows in a single system. Like EBSCO ERM, however, Koha required ongoing administrative investment and technical capacity that proved difficult for a smaller institution with a limited staff.

Taken together, these comparisons show the progression from general-purpose tools to specialized systems. Spreadsheets and Notion offer alternative, nonstandard, low-cost fixes but lack scalability and efficiency. EBSCO ERM and Koha deliver comprehensive, library-specific functionality but demand staffing and expertise beyond the capacity of a small library. ClickUp emerged as the best fit for the library's needs, providing a balance of automation, scalability, and usability that streamlined workflows while minimizing training and administrative overhead.

Table 1. Comparison of Notion and ClickUp for Library Operations

Feature	Spreadsheets	Notion	ClickUp	EBSCO ERM	Koha ILS + ERM Module
Primary strengths	Simple, widely available, and familiar to most staff; good for basic recordkeeping	Flexible documentation, collaborative note-taking, and linked databases	Structured task and project management with automation and dashboards	Purpose-built for managing the life cycle of electronic resources: agreements, licenses, orders, invoices, and holdings	Full ILS + built-in ERM: manage both electronic and physical resources in one platform
Automation	Limited; all data entry, updates, and reminders must be done manually	Minimal; relies on third-party integrations and manual updates	Built-in; supports automatic task assignment, reminders, and workflow routing	High; integrates with EBSCO Knowledge Base to update link resolvers, catalogs, discovery, and access rights automatically	Significant—ERM automates tracking (agreements, licenses, usage reports), e-holdings integrated; ILS functions auto catalog too
Workflow support	Highly manual, prone to errors, no built-in task tracking; requires constant oversight	Adaptable but requires significant customization; steep learning curve for short-term staff	Out-of-the-box templates reduce setup; intuitive training for rotating student workers	Comprehensive life cycle management; includes apps for licenses, agreements, finances, tasks, and e-holdings	ERM module supports agreements, licenses, e-holdings, and usage workflows inside Koha; familiar to staff managing both sides
Reporting	Time-consuming; requires manual compiling, reformatting, and cross-referencing	Basic; exporting and reformatting required for usage or financial summaries	Customizable dashboards provide real-time financial and operational reporting	Built-in dashboards and reporting across agreements, licenses, finances, and usage; designed for library workflows	Custom reporting—including usage statistics (like COUNTER), agreements, holdings within Koha
Scalability	Poor; error-prone and unsustainable as volume or vendor complexity grows	Limited for growing invoice volume or multistep approvals	Scales effectively with increasing invoice complexity and collaborative needs	Highly scalable; supports large collections and multiple vendors with integrated workflows across the library system; built-in dashboards and reporting across agreements, licenses, finances, and usage; designed for library workflows	Scales well across physical and electronic collections, ideal for growing, diverse library needs
Best fit	Very small operations with low volume and limited vendors	Documentation, knowledge sharing, small-scale projects	Operational workflows requiring accountability, reporting, efficiency, and training	Libraries managing complex e-resources life cycles, needing integration with catalogs, discovery, and user access systems	Libraries using a unified ILS who want integrated e-resource management within a single system

Transitioning to an Automated Workflow

Implementing ClickUp as the centralized platform for invoices consolidated the tasks of contract review, invoice verification, and check-request routing into a single, auditable workflow. By consolidating all invoice-related tasks into a single system, the library team eliminated long-standing inefficiencies, reduced errors, and created a scalable process for handling payments. This shift provided greater clarity, accountability, and timeliness in invoice management, ensuring uninterrupted access to essential resources.

Previously, invoices were tracked through emails, spreadsheets, and paper files—leading to disorganization, delays, and financial discrepancies. Although Notion provided some structure, its limitations reinforced the need for a more sustainable solution. ClickUp centralized tasks, assigned responsibilities, and provided real-time updates within a single system.

Task Decomposition and Workflow Design

A crucial step in implementation was splitting invoice management into smaller, actionable phases:

1. Contract—receive, sign, send
2. Invoice—receive, create, send
3. Payment—create, sign, submit

These phases were mapped into ClickUp tasks, ensuring each step was completed before moving forward. This structured approach minimized bottlenecks and reduced errors (see table 2).

Table 2. Breaking Down the Invoice Management Process

Contract	Invoice	Check Request
Receive vendor contract	Receive vendor invoice	Create check request form
Review vendor agreement terms	Verify invoice terms and accuracy	Attach required documentation
Secure internal approvals and signatures	Create invoice record in ClickUp	Route for signature
Return signed contract to vendor	Forward/countersign if needed	Submit to business office
File and update documentation	Update ClickUp task and documentation	Track status in ClickUp
	Send to business office	

As depicted in figure 1, this workflow begins when the library director receives a contract from a vendor and reviews it before sending it to the Vice President of Planning for approval. Once signed, the contract is returned to the vendor, who then provides a countersigned version. After the vendor issues an invoice, the library director passes it along to the intern, who prints two copies and prepares a check request form. The completed form and invoice copies are submitted to the central business office, while the intern simultaneously logs and tracks progress in ClickUp. From there, ClickUp generates reports and dashboards that summarize invoice activity by vendor, fiscal period, or overdue status. Finally, the business office and institutional leadership review these data visualizations, ensuring financial accountability and operational transparency across the workflow.

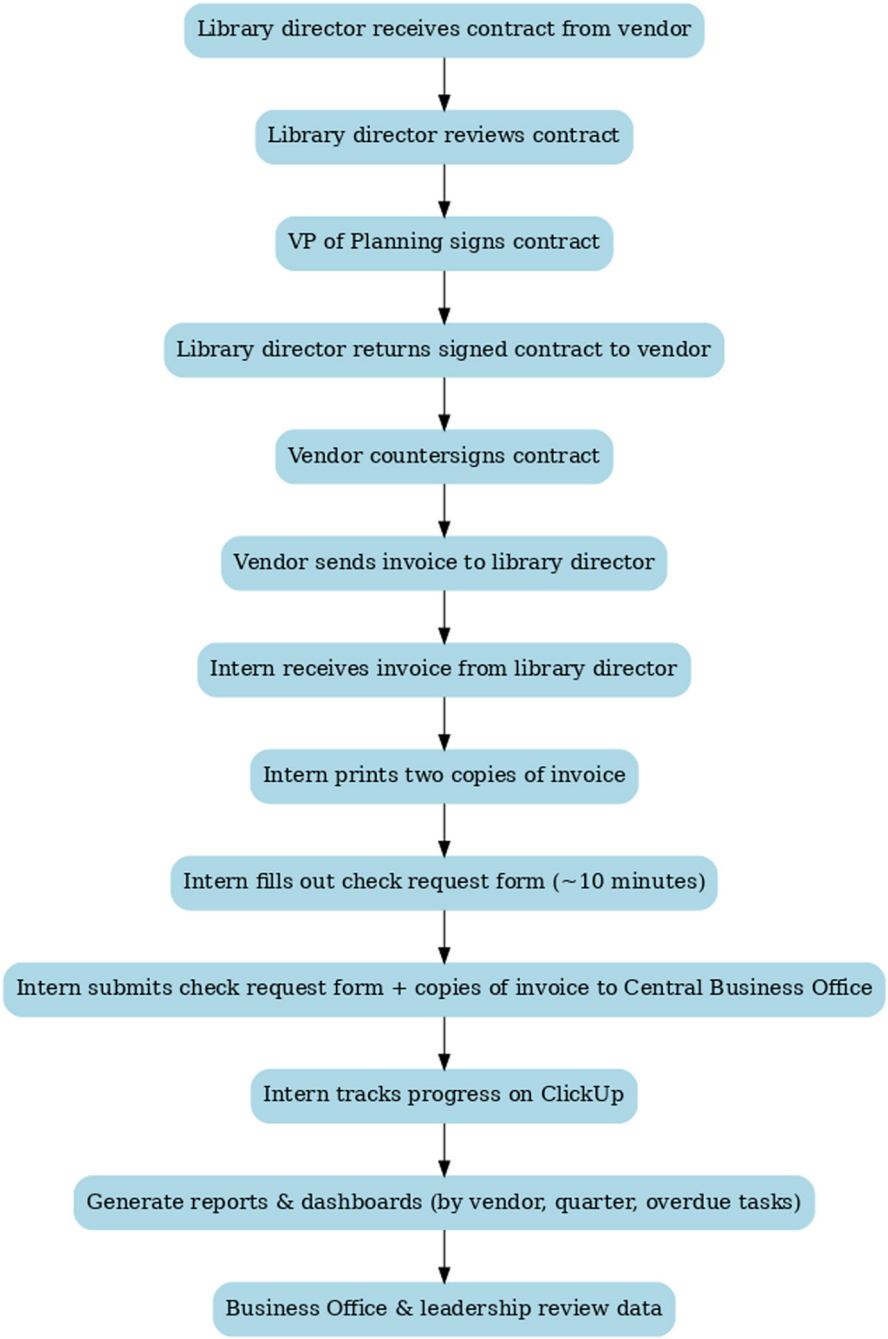

Figure 1. Check request workflow chart.

Visualization and Bottleneck Resolution

ClickUp's visualization tools—including mind maps and workflow charts—provided a clear overview of the full invoicing process. Visualizing task dependencies helped identify recurring issues, such as delays in check request approval. Using these tools in weekly review meetings, the team was able to make real-time adjustments, improving overall efficiency (see figure 2).

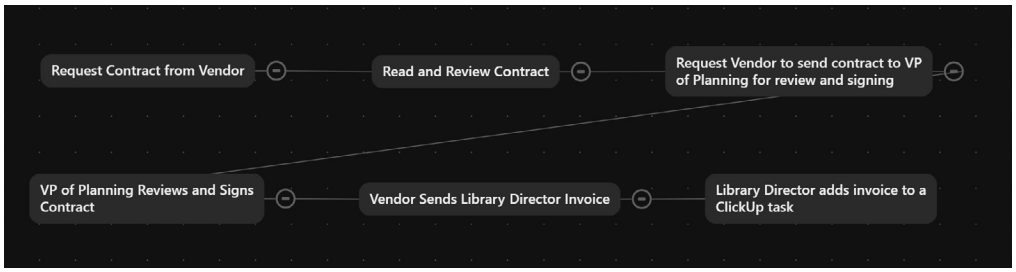

Figure 2. Electronic Resources Workflow mind map.

Customization and Role Assignments

Customized task statuses—such as Invoice Received, Check Request Submitted, Awaiting Payment, and Completed—created a shared vocabulary that clarified progress and reinforced accountability across all stages of the invoice management process. These labels not only provided real-time visibility into the status of each task but also established a consistent framework that both professional staff and rotating student workers could quickly understand. Role assignments further complemented this clarity: Interns were tasked with processing check requests, while the library director reviewed and approved them before submission to the business office. This structured delegation eliminated confusion over responsibilities and ensured that every action was documented and traceable, as shown in figures 3 and 4.

ClickUp's customizable status settings allowed the library to align its workflows precisely with the contract and invoice life cycle. As illustrated in the Electronic Resources Workflow, statuses were tailored to reflect sequential phases: early-stage actions, such as TO DO and EMAIL VENDOR; intermediate checkpoints, such as Invoice Received, Contract Review, and Check Request; and completion markers, including Contract Signed and Check Request Paid (see figure 3). By mapping the entire process in this way, the library created a transparent chain of responsibility that minimized ambiguities and reduced risks of delays.

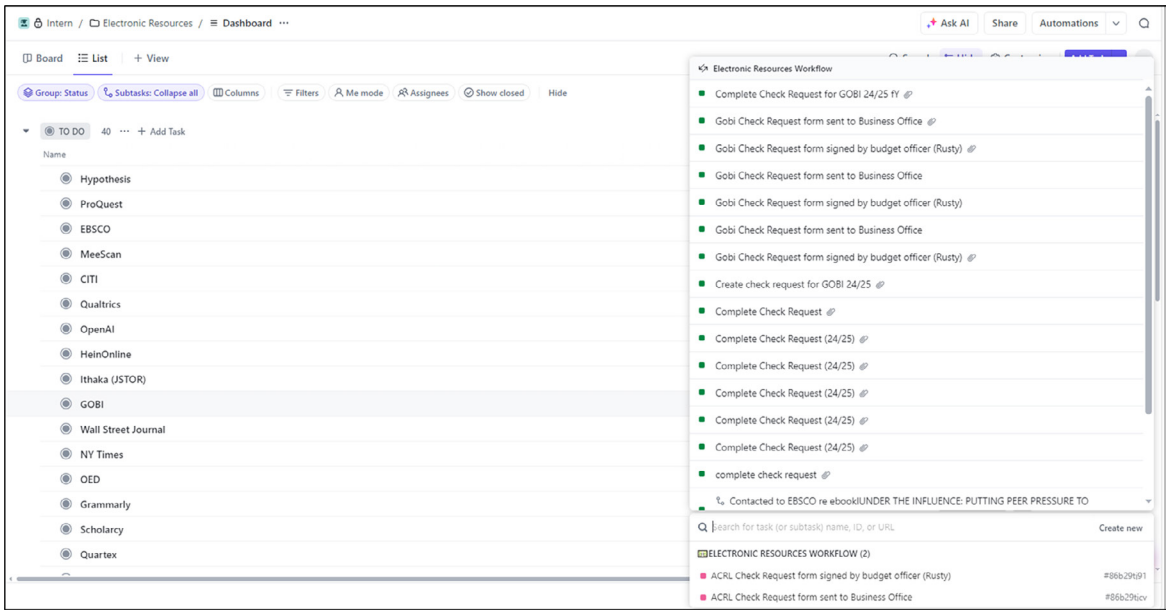

Figure 3. Dashboard of vendors and relationships to tasks with ClickUp.

This granular breakdown also supported real-time monitoring. For example, once a contract was reviewed and signed by the Vice President of Planning, the next step was triggered automatically when the vendor returned a countersigned copy. The invoice was then sent to the library director, logged into ClickUp, and assigned a new status that launched the subsequent workflow. Each handoff—from contract to invoice to payment—was documented within the platform, reducing the informal, ad hoc communication that previously led to confusion or misplaced documentation. Figures 3 and 4 demonstrate how these customized statuses and vendor dashboards provided both microlevel detail on task progress and macrolevel visibility into the broader invoice life cycle.

Importantly, this model of customization and delegation is scalable. Although this case study focuses on invoice management, the same approach—defining task statuses that mirror real processes, assigning roles that match staff capacity, and using dashboards for oversight—can be applied to other library functions, such as acquisitions, renewals, and even instructional technology management. By tailoring statuses and roles to specific workflows, libraries of different sizes and staffing models can adapt ClickUp (or comparable project management platforms) to support their unique operational needs, ensuring both consistency and adaptability over time.

The Electronic Resources Workflow in ClickUp uses a series of customized statuses to track every stage of invoice and contract management. These include:

- **To Do**—initial placeholder for new tasks
- **Email Vendor**—prompts communication with the vendor
- **Follow Up**—indicates pending responses that require staff action
- **Waiting for Response**—flags when the library is awaiting vendor feedback
- **Respond**—designates that a reply to the vendor is required
- **Invoice Requested**—records that an invoice has been requested from a vendor
- **Waiting for Invoice**—identifies tasks paused until the vendor provides an invoice
- **Invoice Received**—confirms receipt of the vendor's invoice
- **Need to Pay Invoice**—signals that payment must be initiated
- **Invoice Paid**—marks the invoice as fully processed and paid
- **Contract Requested**—records that a contract has been requested
- **Contract Received**—indicates that the vendor has submitted the contract
- **Contract Signed**—confirms execution of the contract
- **Renewal Notification**—highlights upcoming renewal deadlines
- **Check Request**—documents that a check request form has been created
- **Check Request Review**—shows that the check request is under review before submission

Color coding is applied to reinforce meaning:

- **Red** for delays or pending responses (*Waiting for Response, Invoice Requested, Renewal Notification*)
- **Green** for contract-related progress (*Contract Requested, Contract Received, Contract Signed*)
- **Blue** for payment stages (*Check Request, Check Request Review*)

Together, these statuses create a comprehensive, step-by-step framework that ensures tasks move through the life cycle of ERM with clarity and accountability (figure 4).

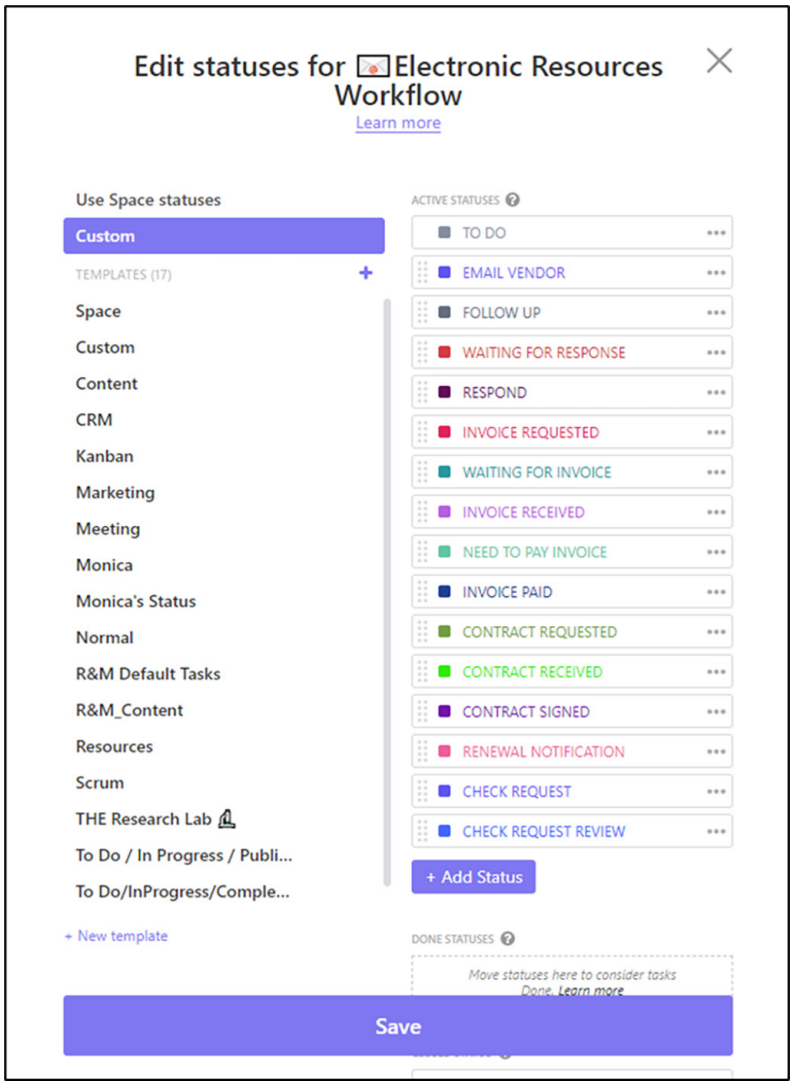

Figure 4. List of task statuses in the Electronic Resources Task within ClickUp.

Centralization and Transparency

Consolidating workflows within ClickUp replaced fragmented tracking with a single source of information on contracts and invoices. Vendor dashboards, such as those for GOBI, displayed all associated tasks, histories, and statuses at a glance—making it easier to search. Integrations with Google Drive and Excel allowed contracts, invoices, and payment confirmations to be attached directly to tasks, reducing misplaced data and streamlining documentation (figure 5). This reduced the need to identify past invoices by year in multiple Excel sheets or in different types of ERMs when we received reminders to pay the bill via email.

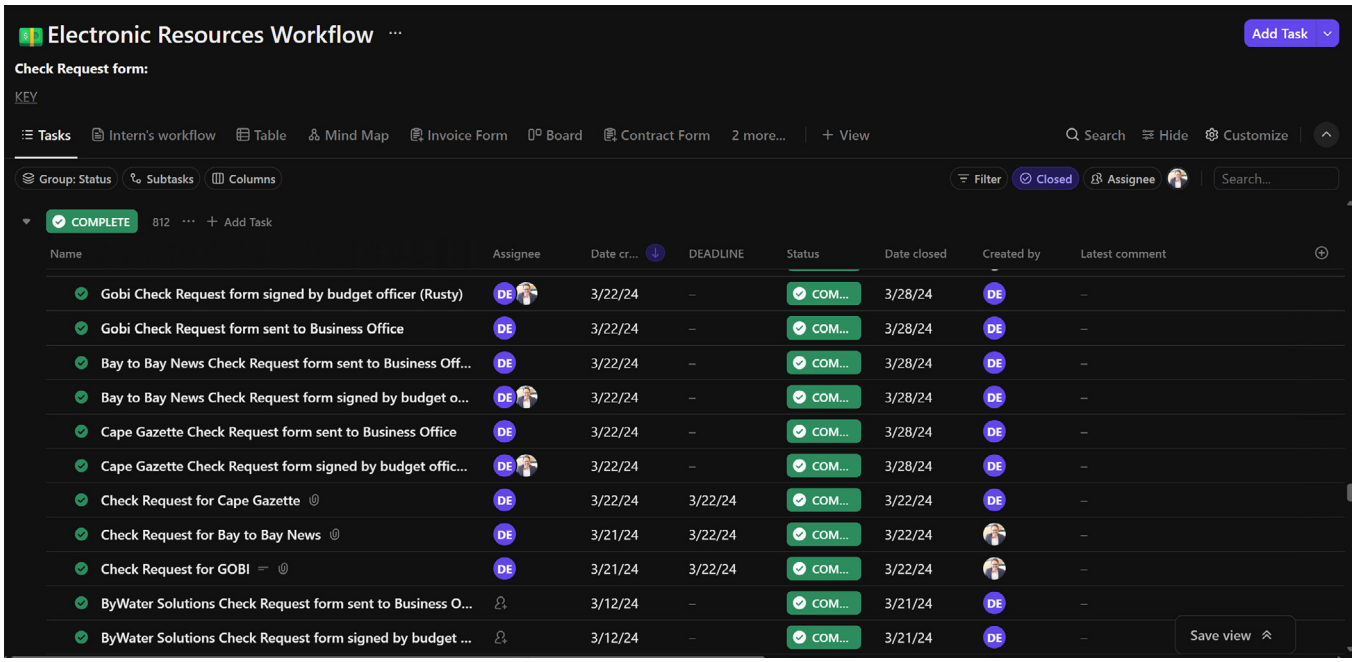

Figure 5. Completed tasks in the Electronic Resources Workflow within ClickUp.

Automation and Efficiency Gains

One of ClickUp's most transformative features was automation. Repetitive tasks such as updating statuses, sending reminders, or triggering next steps were automated, reducing administrative burden and human error. For example, marking an invoice as *Submitted* automatically advanced it to *Awaiting Payment* and notified the responsible staff member, the library intern. These efficiencies allowed staff to focus on resource management and patron services instead of routine administration.

Reporting, Analytics, and Planning

ClickUp's reporting and analytics tools became a central component of our invoice management transformation, moving the library beyond basic task tracking into proactive financial planning. Unlike prior spreadsheets or Notion workflows, ClickUp provided both out-of-the-box dashboards and customizable reporting options. Out-of-the-box templates such as workload charts and activity timelines offered immediate visibility into task assignments, overdue invoices, and overall processing volume. In addition, we built custom dashboards tailored to library operations that included filters by vendor, fiscal period, resource category, time spent on tasks, and contract or invoice status. These refinements allowed us to analyze costs across categories—print, electronic, open access, and educational technologies—while also tracking how much time staff and interns dedicated to each phase of the invoicing workflow. Such insights were not possible in earlier systems.

This combination of standardized templates and custom reports supported both daily operations and long-term planning. On a day-to-day basis, ClickUp reports allowed staff to monitor overdue invoices,

identify bottlenecks in approval chains, and ensure accountability through transparent task histories. Over time, analytics revealed seasonal patterns—for example, spikes in renewals during the summer when student workers were unavailable. Recognizing these cycles enabled us to adjust staffing schedules, plan training in advance, and reduce end-of-year bottlenecks. Similarly, dashboards summarizing vendor obligations and contract statuses became central in budget meetings with the business office, providing real-time visibility into payments, outstanding obligations, and upcoming renewals.

Reporting also strengthened the library's negotiating position with vendors. Historical spending reports, paired with contract status dashboards, allowed us to demonstrate cost escalations, usage trends, and payment histories. This evidence-based approach informed renewal decisions and supported requests for more favorable terms. Beyond vendor relations, reports provided the central business office with standardized, real-time data, reducing misunderstandings and reinforcing institutional trust in the library's financial workflows.

Finally, reporting extended ClickUp's value beyond invoice tracking to a strategic planning framework. Workload charts not only balanced invoice-processing tasks among interns but also documented staff capacity constraints, which supported requests for additional hours for student workers. Time-tracking data highlighted the administrative burden of repetitive tasks, helping justify automation and staff development initiatives. Custom contract-status reports gave administrators and auditors a clear picture of compliance and renewal pipelines, strengthening accountability and transparency across departments.

In short, ClickUp's analytics transformed financial workflows from reactive to data-driven. By combining out-of-the-box tools with locally designed dashboards, the library gained actionable insights into staff capacity, vendor relationships, and budget cycles. This shift turned ClickUp into more than a project management tool: It became an evidence-based decision-making platform, aligning library operations with institutional priorities and addressing inefficiencies that had long strained a lean staffing model.

In practice, we rely on a mix of out-of-the-box reports (Workload, Activity, and Due Soon summaries) and custom dashboards (Vendor Obligations by Fiscal Period, Invoices by Status and Aging, Renewal Calendar, and Time on Verification vs. Routing). These views informed three planning decisions: (1) shifting student-worker hours into the June–August renewal spike; (2) prescheduling signature windows with finance leadership during peak months; and (3) using year-over-year vendor spend alongside usage summaries in negotiations to curb price escalations. Because the same dashboards feed both operations and meetings with the business office, we reduced back-and-forth reconciliation and improved forecast accuracy.

Security and Compliance

Ensuring the security and compliance of financial workflows was a critical consideration when implementing ClickUp. Because invoice management involves sensitive financial data, vendor agreements, and institutional records, it was essential to establish safeguards that protected both the integrity of the data and the library's compliance with institutional and external requirements.

Quarterly Security Reviews

The library instituted quarterly reviews to monitor and reinforce compliance. These reviews included:

- Role-based permission audits to confirm that only authorized staff—such as the library director and designated interns—could access sensitive financial tasks and attachments: Permissions were aligned with the principle of least privilege, ensuring that staff had access only to the tasks necessary for their role.
- Compliance checks with institutional policies, including data retention standards, acceptable use guidelines, and vendor contract stipulations: Any updates in institutional information technology (IT) or financial policies were reflected in ClickUp workflows to maintain alignment.
- Integration reviews with SharePoint, verifying that financial records and contracts stored outside of ClickUp were properly linked, secure, and accessible only to authorized users: These reviews also ensured that sensitive files were not inadvertently stored in ClickUp when institutional policy required them to be maintained within SharePoint's controlled environment.

Audit Trails and Accountability

ClickUp's built-in audit trails added another layer of compliance. Each action—such as uploading an invoice, changing a task status, or approving a check request—was automatically logged with a time stamp and the responsible staff member. These logs not only supported accountability within the library but also provided the central finance office with a verifiable chain of custody for financial transactions. In cases of vendor disputes or internal audits, the ability to produce complete documentation of every step in the invoice life cycle proved invaluable.

Data Privacy and Vendor Agreements

ClickUp's role in invoice management required careful consideration of vendor agreements and institutional obligations regarding data privacy. To minimize risk, sensitive financial records (such as account numbers, bank information, or signed contracts) were stored in the institution's secure SharePoint environment, with ClickUp used primarily as a task-tracking and communication layer. This separation reduced exposure of sensitive data while maintaining the efficiency of centralized workflows. Regular vendor compliance reviews also ensured that the use of third-party platforms did not conflict with licensing agreements or institutional privacy standards.

Institutional Collaboration

The implementation of these safeguards required collaboration with the central IT and finance offices. By aligning ClickUp's workflows with institutional compliance frameworks, the library built confidence that invoice management practices met broader institutional requirements. This collaboration also positioned the library as a responsible steward of financial data, strengthening relationships across departments.

Sustainability of Security Practices

Finally, documenting these security measures within the library's procedural manuals ensured continuity despite student worker turnover. Each new intern or staff member was introduced to the library's security protocols during onboarding, reinforcing a culture of accountability and compliance. This sustainability ensured that the efficiencies gained from workflow automation were not offset by new vulnerabilities.

Impact on Operations and Vendor Relationships

With automation, clear delegation, and centralized tracking, even a lean staff could handle larger invoice volumes during peak periods. Consistent payment timelines improved vendor trust, while complete records of communications aided dispute resolution. Beyond daily operations, ClickUp helped forecast peak invoice periods, align staffing with demand, and improve budget planning.

ClickUp transformed the library's invoice management from a fragmented, error-prone process into a centralized, scalable, and efficient workflow. By combining task decomposition, workflow visualization, automation, reporting, and compliance, the system not only improved operations but also positioned the library to better serve its mission: ensuring uninterrupted access to essential resources.

Brief Discussion on Return on Investment for Workflow Automation Tools Using ClickUp

The adoption of ClickUp for invoice management significantly improved our library's operational efficiency by reducing administrative burdens, improving accuracy, and freeing up valuable staff time for more strategic tasks. In this case study, return on investment (ROI) is measured not only in financial terms but also in time saved, error reduction, productivity, and scalability—areas where libraries, regardless of size, often face persistent constraints.

The costs associated with implementing workflow automation tools can be divided into three categories: upfront costs, customization costs, and ongoing costs. As shown in table 3, our library experienced moderate upfront costs for subscription fees, setup, and training; variable costs for customizing workflows; and low-to-moderate ongoing costs for renewals and security monitoring. These expenses were quickly justified by the efficiency gains realized after implementation.

Table 3. Cost Considerations and Return on Investment Summary for Workflow Automation in Academic Libraries

Cost Factor	Description	Estimated Impact
Upfront costs	Subscription fees, setup, and staff training	Moderate—one-time investment with onboarding required
Customization costs	Workflow automation setup and integrations	Varies—depends on institutional needs
Ongoing costs	Subscription renewal, security monitoring	Low to moderate—ongoing but justified by time savings

The benefits of ClickUp became especially clear when comparing preimplementation challenges with postimplementation outcomes. As detailed in table 4, prior to adoption, our manual processes led to frequent delays, duplicate or missed payments, and strained vendor relationships. After implementation, processing time decreased by 50 percent, duplicate payments were eliminated, and vendor trust improved because of timely and accurate payments.

Table 4. Operational Benefits of Workflow Automation: Preimplementation Challenges Versus Postimplementation Gains

Benefit	Preimplementation Challenges	Postimplementation Gains
Time savings	Manual tracking led to frequent delays.	Processing time reduced by 50%.
Error reduction	Duplicate or missed payments were common.	Errors reduced to zero.
Productivity	Staff spent excessive time managing invoices.	Automation freed up staff for other tasks.
Vendor relations	Payment delays caused strained relationships.	On-time payments improved trust.

Performance metrics reinforce these outcomes. As shown in table 5, the average invoice processing time decreased from twenty minutes per invoice to ten minutes per invoice, representing a 50 percent reduction. At the same time, duplicate payments, which previously averaged three per month, were eliminated entirely. These hard metrics illustrate how automation created tangible, measurable improvements that went beyond anecdotal staff feedback.

Table 5. Key Performance Metrics before and after Clickup Implementation

Metric	Before ClickUp	After ClickUp	% Improvement
Average invoice processing time	20 minutes per invoice	10 minutes per invoice	50% decrease
Error rate (duplicate payments)	3 per month	0 per month	100% reduction

Although our experience reflects the realities of a small institution, the outcomes and lessons apply more broadly. As libraries grow in size and complexity, ROI manifests differently. Table 6 generalizes the impact of workflow automation for three contexts—small, mid-sized, and large libraries—highlighting how efficiency, coordination, and scalability align with institutional needs.

Table 6. Scaling Return on Investment for Different Library Sizes

Library Context	ROI Emphasis	Example Impact
Small/Lean-staff libraries	Efficiency, continuity, and reduced administrative burden	50% faster processing ensures a solo librarian can redirect time to instruction, outreach, or user services.
Mid-sized libraries	Coordination across multiple workflows and staff	Automation reduces duplication between acquisitions and the business office, improving accountability.
Large libraries/consortia	Scalability, negotiation leverage, and compliance	Analytics strengthen vendor negotiations, dashboards streamline multistep approvals, and reporting supports audits and ERM integration.

ERM, Electronic Resource Management; ROI, return on investment.

Challenges and Lessons Learned

Although the implementation of the centralized project management software, ClickUp, significantly improved invoice management workflows, the transition was not without challenges. Regardless of size, libraries adopting new project management systems must anticipate adjustment periods, training needs, and ongoing refinements to sustain long-term success. The following challenges and mitigation strategies reflect issues commonly encountered in both small and larger institutions.

Initial Difficulties in Implementation

Transitioning from manual or semimanual processes to an automated workflow platform requires careful planning. Early challenges often include:

- Customizing workflows to fit institutional or departmental financial practices
- Investing time in configuring task statuses, automation rules, and integrations with existing financial systems
- Addressing the learning curve for staff who may be accustomed to spreadsheets, email chains, or ILS modules

Mitigation Strategy

Libraries can address these challenges by providing targeted training focused on core functionalities relevant to invoice management. Phased adoption—allowing teams to gradually transition tasks into the new platform—can reduce disruption and provide time to refine workflows. Larger libraries may consider forming implementation teams with representatives from acquisitions, technical services, and IT to coordinate rollout and ensure institutional alignment.

Staff Resistance to Change

As with any technological transition, staff may express reluctance to adopt new systems. Common concerns include:

- Preference for familiar, manual workflows

- Skepticism about the long-term value of investing in new platforms
- Fear of added complexity or duplication of effort

Mitigation Strategy

Resistance can be mitigated by emphasizing the tangible benefits—automation that reduces repetitive work, improves transparency, and provides consistent tracking. Creating feedback loops where staff can share concerns and propose improvements fosters buy-in. In larger libraries, piloting the platform in one department before scaling institution-wide can demonstrate success and build momentum.

Long-Term Sustainability Concerns

Sustainability is a consideration for any library, whether small or large. Key concerns include:

- Cost—Free tiers may suffice during pilot projects, but premium features (automation, integrations, advanced reporting) often become necessary as workflows expand.
- Scalability—Libraries must ensure the chosen platform can handle increasing invoice volume, multistep approval chains, and cross-departmental coordination.

Mitigation Strategy

Conducting a cost-benefit analysis and benchmarking against alternatives helps justify the investment. Efficiency gains, error reduction, and stronger vendor relationships often outweigh subscription costs. For larger libraries, scalability may also involve ensuring system integrations with ERM systems or consortial financial tools. Maintaining adaptable workflows helps prepare for future transitions if institutional needs change.

Security and Data Privacy Concerns

Because invoice management involves sensitive financial data and vendor agreements, security is a central consideration. Concerns include:

- Storing financial data in third-party platforms
- Ensuring compliance with institutional IT and financial policies
- Managing role-based permissions across multiple staff or departments

Mitigation Strategy

To minimize risks, libraries should establish strict access controls, align workflows with institutional compliance frameworks, and use integrations (e.g., with SharePoint, Google Drive, or ERM systems) to store sensitive financial documents in secure environments. Regular security reviews and collaboration with IT or finance teams help ensure compliance and reinforce institutional trust. Larger libraries may also require system-wide audits or formal vendor risk assessments before adopting new platforms.

Outcomes and Impact

The implementation of ClickUp has significantly enhanced the clarity, accountability, and coordination of the library's invoice management workflow, which is particularly important in a setting staffed by a solo librarian, student workers, and an intern with academic and athletic commitments that take precedence over library tasks. The primary benefits of ClickUp in this case study include:

- Improved task responsiveness across staggered schedules: While invoice turnaround time remains dependent on individual work schedules, ClickUp ensures prompt processing by assigning each invoice task directly to the intern. Upon beginning their next shift, the intern consults a personalized dashboard that prioritizes invoice-related tasks, allowing for efficient action without confusion or delay.
- Centralized and transparent tracking of all invoices: All vendor invoices—including those for print materials, electronic resources, EdTech tools, open-access services, and training platforms—are now fully logged, tracked, and moved through a standardized ClickUp workflow. This centralized approach eliminates prior fragmentation and ensures continuity, regardless of who is working.
- Stronger handoffs and reduced bottlenecks: ClickUp's task assignment and dashboard features enable seamless collaboration between the library director and student staff. When the library director receives an invoice or contract, it is logged and assigned immediately, creating a clear handoff and ensuring progress is not stalled. The system also maintains a complete audit trail for institutional accountability and reporting.

Rather than emphasizing rigid turnaround times, these outcomes demonstrate how ClickUp supports scalable, resilient workflows and ensures consistent invoice processing even within the constraints of a lean and rotating staff structure.

Conclusion

Based on the successful adoption of ClickUp, this case study offers practical strategies for academic libraries seeking to streamline invoice management through scalable, technology-enabled workflows. Academic libraries often face inefficiencies stemming from decentralized processes that disrupt invoice tracking, vendor communication, and financial reporting. To address these issues, adopting an integrated project management platform—whether ClickUp, Trello, or a comparable system—can centralize operations, minimize fragmentation, and create repeatable structures that scale with expanding collections and vendor relationships. Early adoption of such systems supports smoother transitions and operational continuity.

Because every library operates under distinct institutional constraints, workflow transformation must begin with a careful mapping of existing processes. Identifying bottlenecks, clarifying task dependencies, and pinpointing inefficiencies create the foundation for automation. Once mapped, repetitive tasks such as invoice status updates, check request submissions, and vendor follow-ups can be automated to reduce administrative burdens and support asynchronous staffing models. Embedding automation into daily routines reflects Lewin's "unfreeze-change-refreeze" model, enabling new operational habits to take root and persist over time.

Equally important is the role of data in guiding performance improvement and long-term planning. Libraries that incorporate reporting tools—whether through ClickUp dashboards or external platforms like Tableau—gain visibility into processing time, vendor responsiveness, and budget cycles. These insights support transparency, accountability, and evidence-based decision-making, strengthening both internal planning and external negotiations.

Clear communication across library staff, finance teams, and vendors is also essential. Centralized project management platforms embed collaboration directly into workflows through in-task comments, role-based permissions, file sharing, and automated alerts. This reduces friction, ensures accountability, and prevents delays that compromise vendor trust and resource access.

The transition from manual, fragmented processes to an integrated platform not only improved efficiency at our library but also strengthened vendor relationships and provided valuable insights for long-term planning. Key takeaways include the importance of selecting a user-friendly system, tailoring workflows to institutional needs, and providing sufficient training to ensure adoption. For smaller libraries in particular, automation and scalability enable lean staff to manage increasing workloads without compromising accuracy or timeliness.

Our adoption of ClickUp has since expanded beyond invoicing to include approvals, helpdesk ticket management, and coordination of educational technology tools. This broader use demonstrates how project management platforms can reinforce communication, support cross-departmental projects, and strengthen organizational culture. By embedding such systems into diverse areas of library operations, institutions can build resilience, accountability, and sustainability.

This case study adds to the existing literature by documenting the realities of a lean-staffed, master's-level institution—an often-underrepresented perspective in workflow automation research. Although this article focused on invoicing, the same pattern—map → standardize → automate → report—now supports approvals, helpdesk ticket triage, and educational-technology coordination in ClickUp. This extensibility suggests that lightweight project management platforms can strengthen both fiscal workflows and broader cross-departmental operations in lean-staffed academic libraries.

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