

Integrating Student Assistants into Digital Repository Workflows: Challenges and Best Practices

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Abstract

The Scholarly Communication Initiatives and Digital Collections departments within the University of Nevada, Las Vegas adapted staff workflows to become student-centered, where workers create digital content for the University Libraries' digital repositories. Each department has a diverse set of needs; Scholarly Communication Initiatives hires students to help with the creation of metadata records, review open access options for sharing each work, and upload items into the institutional repository. Digital Collections relies on students to scan, create metadata, and upload images online that reflect physical holdings in Special Collections and Archives. Utilizing student workers also provides more time for full-time staff to work on higher-level projects and to update, rethink, improve, and streamline existing workflows. Both departments have found that student-centered workflows teach technical and transferable skills while also encouraging students to grow professionally, academically, and socially, setting students up for success beyond graduation. Empowering the whole student and encouraging their personal and collaborative growth thus helps each department to become more efficient and successful in their missions, a triumph that is possible for any library department of an academic institution. While there is a large body of research on student workers in libraries, including on the topics of management and specific functional areas, there is very little research focused on student workers in digital repositories. This article begins to fill this gap and discusses the philosophies and methodologies of both departments' approaches, as well as the results of implementing student-centered processes for the department and full-time staff.

Introduction

Nearly all of the technical divisions within the University of Nevada, Las Vegas' (UNLV) University Libraries utilizes student employees to complete key tasks related to digital content and repository management. In the past year, the Digital Collections and Scholarly Communication Initiatives departments have made significant changes to how these students are incorporated into workflows. The two departments are in different stages of implementation (Scholarly Communication Initiatives is in the earlier stages while Digital Collections is more established), but both had the same goals of increasing student autonomy and creating formal student roles, freeing up full-time staff to focus on higher level projects and to create more efficient processes. This paper will address the key expectations that guide student employment practices, highlight types of work suitable for students and the associated documentation needed to effectively delegate responsibilities, and discuss UNLV Libraries' strong emphasis on co-curricular benefits of student employment.

Scholarly Communication Initiatives (SCI) is a small department that relies heavily on student employees who assist with metadata creation and special projects. Looking toward the future and with an eye on becoming more efficient, SCI borrowed from other libraries' shared practices (including the University of Pennsylvania and Montana State University), initiated a new training program for students, and created a workflow that supports the ongoing compilation of the UNLV Author Bibliography (a comprehensive yearly list of all faculty scholarship). The department has worked toward several student implementation goals

including increased student autonomy and responsibility for metadata entry, increased departmental capacity for identifying and soliciting open access articles for bibliography records, and shifting permanent staff workload to quality assurance.

Digital Collections (DC) is often the department tasked to carry out time-sensitive or externally funded Special Collections and Archives projects, requiring managers to be flexible and confident in applying skilled workers to key priorities. Building on twelve years of experience growing the department, student employees have become central to the timely completion of high-profile projects and are typically hired, trained, and begin working independently within one month of hire. Student positions handle a range of complex tasks including capturing content with a high-tech camera system, interpreting the department's metadata application profile to create metadata, and keeping track of inventory and digitization prep for several outsourced projects. These high-level tasks cannot be effectively delegated without clearly communicated job expectations, detailed procedures for each step of the workflow, and the support of a dedicated student supervisor who attends to all aspects of the students' success.

Literature Review

Student assistants have been part of the U.S. library workforce for over a century, and many of the discussions that began in early days continue to the present time. In White's article (1985), an interesting history of student labor is presented that dates back to the 1800's. The author summarizes the philosophies that guided early student work and notes that from the first years, students have been described as helping with library work in three ways: "as an expediter of library process and procedures," "as 'co-worker' or un-official colleague," and as workers "selected, trained, supervised, and evaluated according to an organized program that purports to develop student potential in library work." Today, most student workers' responsibilities are a blend of these three ideologies. White also noted that the modern explosion of student labor happened post-WWII in conjunction with the creation of the Federal Work Study Program which encouraged students of lower economic advantage to work alongside professionals in a college or university setting. The author concluded that by 1985, reluctant academic librarians had finally begun to rely heavily on student workers for increasingly complex work.

During the 1990's, student work continued to evolve and was shaped by the advent of new technologies in libraries. In particular, Reeg-Steidinger, Madland, and Hagness (2005) noted that professional librarians were taking on increasing workloads affected not necessarily by an increase in user numbers but instead by an increase in the time required to spend with users or on complex tasks. This concept was written about across the literature, detailing how students worked to benefit librarians across functional areas. More time was needed by employees in public services as well as back-of-the-house technology support roles, web development, digitization and scanning, and technical services departments.

Farrell and Driver (2010) discuss the growth and increasing dependency on student workers across libraries in their case study. They observed in Kentucky that library students made up 27.5% of the total workforce in 2006 with a similar rate nationally (25.6%). Gremmels (2013) discussed this trend, noting that "front-line reference service is shifting to paraprofessionals and student workers." Student labor is often mentioned as a cost-saving and more flexible option for filling gaps or dealing with lean financial times. There are also benefits to having students as relatable "faces" of academic public services, demonstrated by programs that offer peer research coaching or student-to-student models. Many articles discussed these trends in public services through case studies of practical advice in training techniques (Becker-Redd, Lee, and Skelton, 2018) and the growth of implementing various models of peer-to-peer

research programs. Most research articles focused on benefits in the areas of enhanced user services (particularly to undergraduate student users) and the benefits to student workers who were first entering the professional workplace. The article by Benjamin, Brigandi & Huffaker (2018) acknowledged that

“Though most student workers will not go on to careers in libraries once they’ve graduated, many students don’t realize the transferable skills they are gaining through their job in the library. However, their position with the library can provide them with experience that will be invaluable to future employers, such as customer service skills, attention to detail, problem solving and time management skills. In the future, a goal of the department is to spend more time showing students how their daily tasks in the library are helping them to become top candidates to future employers.”

The aforementioned benefits to students are strongly supported throughout the literature and point out that for many students, library positions are their first work experience in a professional environment. Even for students with work experience, the library provides opportunities to gain valuable transferable skills with the advantages of working in a supportive academic setting. All students can benefit from learning task-oriented technical skills in an environment where “real world” systems are in use, and students can test out classroom principles (inquiry, research, analysis, communicating results) in conjunction with hands-on practical scenarios on the job. Student workers also have valuable opportunities to use professional technology tools such as databases, sophisticated equipment, and project management systems as part of a cohesive team. In cases where they experience the mentoring and guidance of a dedicated student supervisor, much can be gained in a short period of time from these temporary library positions. In addition to the more general skill sets, digital repositories offer specific digital skills such as:

- Planning and project management
- Metadata, copyright, research, data entry, and data clean-up
- Physical handling and preservation of materials
- Technology, Web development, and graphic design
- Library-specific repository administration, ingest, editing, uploading, and quality review of digital materials
- Digitization standards, scanning, and photography
- Digital literacy and digital citizenship (social media)

While there are examples of articles with mentions of students working in libraries and acquiring these types of skills, there are not many reports that go beyond highlighting superficial aspects of student work in digital repositories. In the article by Breitbach, Tracey, and Neely (2002), the authors discussed a digitization project that featured undergraduate students as project managers. They noted that prior to starting their project, “literature on the use of student assistants in managing digital collections is fairly limited.” Since 2002, a few authors have delved deeper into the potential for students working with digital collections, particularly institutional repositories. One such work is Wiperman and Whitebloom’s (2017) presentation on the role of students in providing an improved, mediated deposit experience for faculty authors. The authors describe extensive workflows and training for newly hired student assistants, going far beyond metadata entry by including students in more complex copyright and authors’ rights workflows. Marsh, Wackerman, and Stubbs (2018) describe the potential role of student employees in marketing repositories because of their connections to professors on campus. Student may assist in highlighting the repository to faculty for their own research or for potential coursework and assignments that could fit with the repository. The University of

Toronto Library similarly found that student employees were invaluable to the repository's success and solely managed its submissions (Devakos, 2006).

From the outside, the use of student assistants could seem to be a standard library practice that may not require specific literary focus. However, the literature on the impact and contribution to digitization efforts by student assistants is not evidenced by searching the traditional library and information science literature. Most case studies mention students in the context of a project work plan or as a way of crediting student contributions as part of overall department functions. Review of the literature did not offer much substantial data on how new student supervisors might advocate for student workers, train them to enhance digital repository work, select roles appropriate for them to take on, or mentor students in the digital repository environment to gain both transferable and digital skills that can form a foundation for their future professional success.

Although there are challenges to student supervision that appear throughout the literature, most of the authors agree that the investment in student labor is worth the cost. In this article, we will reflect on this gap in the research and seek to summarize student work in two digital repository environments while offering lessons learned and practical recommendations for new student supervisors.

Description of Program/Service

The UNLV University Libraries employs over one hundred students in various departments and library branch locations, where they take on a variety of tasks and responsibilities. Over the past several years, the University Libraries has developed a culture of providing unique work opportunities for library student employees. Students can work as student assistants as part of the university's work study program, as externally-funded Peer-Research Coaches to help library faculty and staff with higher level tasks such as co-teaching class sessions and helping their peers succeed, or in other capacities (such as grants) depending on their availability and eligibility. As part of this culture, the University Libraries developed the Student Employment Leadership Group (SELG) to help ensure that students are learning positive work, academic, and life skills.

SELG organizes workshops, classes, and resource training activities that are offered throughout the year. In 2012, SELG developed a workshop series and certificate program covering practical skills for school, work, and personal life (Melilli, Mitola, & Hunsaker, 2016). SELG also provides a venue for students across library functional areas to interact with each other as an informal cohort, acknowledging that the Libraries are one of the largest employers of students on campus. Events, such as the annual Student Assistant Appreciation Event, help student supervisors and other University Libraries faculty/staff celebrate the valuable contributions of our students and let students know how much their hard work is appreciated. Additionally, the University Libraries strategic plan at the time of this writing addresses the continuing need to grow and expand opportunities for students to work in the Libraries. Through these resources, UNLV believes it has set up an environment and student work culture that ultimately benefits the whole student. Students often seek employment in their freshman year of college and continue through their senior year, which offers libraries the unique opportunity to help students grow in what is likely to be their first professional position. The availability of supplemental workshops and training allows students to freely gain important skills, such as work etiquette or building a good resume, that will support them in future employment searches. In addition to the SELG program and culture, each department in the University Libraries that

employs students has their own specific ways of training, growing, and celebrating student workers.

Scholarly Communication Initiatives

Digital Scholarship@UNLV (UNLV's institutional repository) was first launched in 2009, with student workers incorporated into the workflow shortly thereafter. They uploaded full-text documents, reviewed incoming faculty Curriculum Vitae (CVs) and sent requests to the faculty authors to obtain full-text journal articles that could be posted pursuant to publisher policy. These requests often went with a low response rate, particularly in cases where the articles being requested had been published several years prior. Much of the repository was populated with other types of collections, such as theses and dissertations, programs for sporting events, musical and theatrical performances. Beginning in 2015, the UNLV Bibliography project was launched to begin keeping a more complete record of UNLV faculty scholarship output in the form of metadata-only records. In its first iteration, the records added on an annual basis to Digital Scholarship@UNLV were based primarily on publications annually self-reported to the faculty activity reporting system in use across campus, Digital Measures. This data was often incomplete, incorrect, duplicated by multiple author entries, and took significant manual effort to normalize for batch upload into the repository. The process was highly inefficient and took more than a year to complete. Beginning in 2017, the UNLV Bibliography underwent a drastic workflow overhaul.

SCI began refining this process by researching what other institutions were doing during their ingest processes, including exploring ways they contacted faculty and how they incorporated students and student training into these workflows. Two universities came to our attention quickly - the University of Pennsylvania and Montana State University - because of their unique approaches (Stermann & Clark, 2017; Wiperman & Whitebloom, 2017). The team liked the idea of University of Pennsylvania's self-contained process, which included structured student training and a Google Sheet system to track student progress. We also favored Montana State University's idea of contacting faculty closer to the date of publication and using that contact as a call to action, but also as a celebration of faculty accomplishment. These ideas helped formulate an updated student training process and a new workflow that meets SCI's specific needs and goals.

We begin training students by utilizing a slide presentation and a walkthrough of how our process works, which also provides context for *why* they are doing this work. Students learn about the basics of copyright, publishing agreements and how authors transfer their rights upon publication, and how to understand publisher policies. We include detailed explanations and provide a demonstration of SHERPA/RoMEO, a publisher copyright policies and self-archiving online database. This training structure helps the students to gain valuable insight into the publication process, which can be used personally if they decide to publish research in the future. It also helps the students understand the bigger picture of their role in increasing the discoverability of their university's scholarship so that they can undertake these tasks with an appreciation of their broader impacts.

The workflow itself is relatively simple. A student supervisor creates a Trello card that lists the date of the alert, the name of the database, and the number of citations a weekly alert has. The students get assigned cards and then work through a standardized checklist of steps, based largely on a process designed and licensed for non-commercial reuse by Wiperman and Whitebloom (2017), and review each citation and format it for batch upload. We utilize a Google Sheet that includes instructions for the students, a checklist to keep track of their work, a

formatted batch upload sheet that meets all bepress Digital Commons requirements and runs a SHERPA/RoMEO script (Flynn, 2013), pulling all of the data we need into one clean document. Once an alert is completed and reviewed by a student supervisor, the sheet is downloaded from Google Drive, formatted as batch upload Excel files, and uploaded into Digital Scholarship@UNLV. The final step in our process is to add faculty authors to a monthly email list that is sent at the end of the month. Students list the faculty members' publications and their email address, and a staff member uses the YAMM (Yet Another Mail Merge) add-on to send a template email to faculty. The email congratulates faculty on their accomplishment and either notifies them that we either have added an Open Access version of their work to the repository or requests an allowed version for deposit. Since this process was implemented, we have seen more than triple the amount of responses from faculty and a significant increase in interest surrounding Digital Scholarship@UNLV.

It has been just over a year since implementation, and we have made many small adjustments to the process as needed. Student workers have been integral to ensuring that the process remains in motion. The SCI department generally employs two to three students at any one time. We adapted the University of Pennsylvania process-training model so that students complete three test assignments which help them learn to evaluate SHERPA/RoMEO policy information, correctly enter citation metadata, and identify duplicated or incorrect information. After the training, they are gradually given more and more autonomy when moving through the process. As the student workers become more familiar with researching publications and entering metadata according to our standards, less direct supervision is required. Specific challenges that we have encountered during this process will be covered in a later section.

Digital Collections

The Digital Collections department at UNLV grew over a decade's time from a small two-person staff working with a few flatbed scanners to a robust department of five permanent faculty/staff, several temporary contract workers hired on externally-funded projects, and an increasing number of highly-engaged student assistants. The department successfully proved its value and impact in increasing access to unique library materials through years of agile response to library initiatives that simply would not have been possible without the increased capacity that student labor provided. Today, student workers within Digital Collections autonomously complete a wide array of complex, technical projects immediately after they are trained on scanning and metadata procedures. Students are trained to digitize archival materials, create and edit descriptive metadata, and upload digital assets online for researchers to access remotely. The student supervisor is the project manager for each student's individual work and checks in at different levels of the process to ensure archival scanning standards are upheld and that metadata meets regional and national digital library network standards. Students meet with their supervisor weekly in one-on-one meetings to review their project progress and document their work in shared spreadsheets and on Trello.

Because the department has had the opportunity to hire student workers for several years, the legacy procedures for item-level scanning and metadata creation are very well-refined and the workflow runs like a well-oiled machine! This has allowed full-time staff in the department to adapt workflows and focus on innovation and refinement of methodologies to increase efficiency and ease, producing more digital content online for users than ever before. To complement this mindset, the department has recently adopted a large-scale digitization approach thanks to the addition of our newest equipment, the Phase One camera. This rapid capture system uses a free-standing digital camera to photograph archival materials in a matter of milliseconds rather than minutes (compared to the use of a traditional flatbed scanner). Within

our Digitization Lab, students have access to the Phase One camera along with a flatbed scanner, a book scanner, and a large-format scanner. The flatbed scanner, an Epson Expression 10000XL, is not ideal with our current large-scale workflow, but it provides a secondary scanning tool for students to use if the Phase One machine is occupied. To scan bound documents such as hardback books and magazines, students use the Bookeye 4 V3 Book Scanner that cradles books so as to not damage spines and allows for outputting of materials into multiple file formats. Finally, the Colortrac SmartLF Gxt T56 Large Format Scanner can be used for archival materials of a massive size (up to 5 ft. in width). Because students are able to scan hundreds of items in a single shift, our department's workflows have had to adapt as a new bottleneck in the workflow has emerged: We have hundreds of images ready to go online but we still want to perform metadata enhancement, requiring manual data entry by a student. This challenge will be discussed in the subsequent section.

In previous semesters, Digital Collections has employed up to nine students who help to digitize materials and create metadata content. Students are typically hired during freshman and sophomore years of school and stay within the department until graduation, building their skills each semester as they adapt to technology and content standard changes. Currently, Digital Collections employs four student workers and one grant student worker who is on a temporary, externally funded contract. Each student creates over 50 metadata records every week and contributes to our department's digitization goals of lessening the photo collection backlog that remains to be digitized.

Workflow Comparisons

Although Scholarly Communication Initiatives and Digital Collections have different workflows and output goals for student workers, the two departments share common advantages that come with the management of student employees. First and foremost, because student workers are the primary metadata creators for bibliographic and digital records, full-time staff are able to focus primarily on metadata management, quality review of output, and workflow implementation to increase workplace efficiency. Scanning and metadata creation are time-intensive and tedious projects; by empowering students to create quality metadata, immense amounts of time are freed up for full-time, supervisory staff to guide and train students with their work, consult on digital scholarly communication project development, manage and troubleshoot technology, engage in outreach activities, work on research, and assist with other spontaneous tasks including time-sensitive departmental projects. By providing students with a high level of trust to create complex records, everyone in the department benefits. Students are empowered to learn new skills and take ownership over their work, and supervisors can spend more time managing the department's workload rather than micromanaging individuals' daily tasks.

Students employed in both Scholarly Communication Initiatives and Digital Collections work with moderate to advanced systems, software, and databases, increasing student workers' information literacy skills while they are in school. Scholarly Communication Initiatives' students need to know how to utilize the library catalog, WorldCat, and internet searches to verify unknown citations and become adept at this by the end of their tenure with the department. They are also trained in the Citation Process workflow, which includes metadata entry and batch upload of citation-only records to the Digital Commons platform, and the evaluation of publisher policies and copyright utilizing the SHERPA/RoMEO database. Digital Collections' students utilize inventory databases like ArchivesSpace and digital asset management software including the CONTENTdm Project Client, as well as create metadata and controlled vocabulary terms using Library of Congress, Vial, SearchFAST, Getty Thesaurus of Geographic Names, and

GeoNames databases among others. Working with these tools not only allows students to contribute to authoritative works in scholarly ways, but it also helps to connect *what* students are doing to *why* they are doing it. Students are more likely to contribute thoughtful and accurate work to our repositories when they understand how each resource benefits the academic research community.

Finally, both departments have found that the technical and non-technical work that students complete help to teach transferable skills that will help them with future professional opportunities. While some of the skills that students learn may be specific to research or libraries, many of the strengths students gain can be utilized in other future workplace environments. Students in Scholarly Communication Initiatives and Digital Collections are expected to become proficient in working with Excel and Google Sheets, use and update professional documentation, and complete multiple assigned projects at once. Additional invaluable soft skills include communicating professionally with their colleagues and supervisors in person and via email, working both individually and as part of a team on assigned projects, and taking ownership of the work they create that is visible on the Internet. The student workplace culture at UNLV encourages employees to take advantage of every opportunity to learn so as to succeed after graduation; happily, both SCI and DC have seen immense growth and success from all of the student workers who stay in these described positions during their academic careers.

Challenges Faced

Of course, the management of student workers into technical department workflows brings about its fair share of challenges. Staff in both Scholarly Communication Initiatives and Digital Collections have found three major challenges arise with student workers: teaching technological changes, balancing student and department needs, and high managerial overhead. First, the nature of technology is one of constant flux and change. In the world of librarianship, technological changes require constant attention to the evolution of online information provision to users, a commitment to reliable access to accurate information, regular updates to processes to adhere to changing standards, and stewardship of digital assets in a climate of rapid technological obsolescence. As in the case for all library staff, flexibility and a willingness to learn and adapt to change is required of student employees. Students are often up to the task and many can make adjustments to their processes with relative ease. But, for others that are more comfortable with structured work and repeatable tasks, it can be daunting for learners to undergo these workflow tweaks so frequently. At times it can be difficult to refine workflow habits that seem (from the student perspective) to be working fine.

Another shared challenge is managing the workload of the department while acknowledging that this work is not necessarily the priority of the student completing it. Above all, students are at academic institutions to gain an education; library student employees' must be enrolled at least part time and must maintain a 2.0 GPA in order to be eligible to work. Furthermore, most library student employees at UNLV must qualify for federal work study funds and are subject to legal limits restricting them from working over 20 hours per week while school is in session. Time management is key to balancing academics, personal life, and the responsibilities of a library job. Some students would like to work more (or need the financial support of more hours), but find that depending on the phase of the semester, it is a struggle to maintain minimum hourly requirements while also excelling in school. Semester to semester, students' schedules change and their availability is often unknown until classes begin. Throughout the semester, students also request time off around midterms, study week, finals weeks, and holiday breaks. While there are enough students in each department to get work

done, it can be difficult to manage how much work *could be* completed each semester compared to how much work is *actually* completed with these limitations.

A final shared challenge is the high overhead of managing students. Student employees are hired, trained, mentored, and managed with the same attention and amount of time as any full-time employee. Both Scholarly Communication Initiatives and Digital Collections have created dedicated student supervisor positions because of the amount of work it takes to ensure projects are being completed and procedures are being followed. Managing a budget of student hours, financial aid status, schedule changes, and project timelines is time-consuming and detail-oriented. In essence managing student staff requires many of the same skills of managing a department, just on a smaller scale. As previously mentioned, students' schedules are complex and often change regularly, especially if the student has a second job; this requires the student supervisor to shift work priorities to various employees from week to week to ensure that deadlines are met. Digital Collections in particular has repeatedly experienced student attrition during key phases of time-sensitive projects. It is key to have back up plans and good documentation to make sure that the department can smoothly absorb any fluctuations in student availability. It is also the responsibility of departments' student supervisors to manage not only that work is being completed but also to check in that student employees are keeping up with their academic responsibilities and are taking care of their mental and emotional health. College can be a stressful time for students, and particularly for work study student employees, situations can become dire if they earn a low GPA or lose their financial aid, causing them to also lose their jobs. Managing student employees requires one to be organized, flexible, strong, and empathetic.

While these challenges are shared in both departments, some challenges are specific to either Scholarly Communication Initiatives or Digital Collections at UNLV. Within Scholarly Communication Initiatives, shifting existing workflows over to an entirely new process has resulted in several challenges. The primary challenges faced in SCI related to the implementation of the initial workflow process. The transition from our old workflow to the new workflow, including fine-tuning the initial training process, was difficult for both staff and students alike. Another challenge that presented itself was helping student supervisors to become comfortable with these new workflows. During the creation of the Citation Process, some changes were made to promote metadata best practices, requiring supervisors to re-learn steps they already knew how to perform and to train future students. Finally, the transition period from the previous process to the new process took longer than anticipated due to additional time needed for training, adjustments to the workflow, and the phasing out of projects in progress that were utilizing the previous workflow.

SCI took a few approaches to resolving these challenges. First, additional time was spent in the beginning of the transition period to help students and staff become comfortable with the new workflow. Once the team became familiar with the new process, it was easier to determine that knowledge of Excel and other skills related to metadata creation were important to consider while hiring new students. Second, working with the student supervisors helped to make improvements to documentation, either through clarification of language (too technical), or through the changes in formatting. Third, transitioning was made easier by being flexible as challenges were encountered during the initial months after implementation. Changes were made to the workflows as issues arose, including the incorporation of automatically depositing open access articles into Digital Scholarship@UNLV, the improvement of message clarity and uniformity when emailing faculty, and the addition of more databases to the list of weekly citations. Once it was clear that the process had to be flexible according to the department's needs, it became easier to adjust when future challenges inevitably occurred. Small

adjustments continue to be made to workflows as new information, staffing changes, or technological advancements arise.

Digital Collections' challenges in recent years have been more process and timing-oriented, as increasing student production impacts the department's subsequent workflows. When preparing, digitizing, and creating metadata for many collections in a large-scale workflow, many bottlenecks can arise that slow down this work. With the right scanner (such as the Phase One), hundreds of images can be scanned, cropped, straightened, and output in a single student's shift. However, this creates a backlog of metadata to be completed at a much slower rate. Because students work with legacy collections that contain rich description that needs to be captured in metadata to add value for users, an item-level metadata workflow follows the capture of the digital images. When digitization was slower with the use of flatbed scanners, this issue was not noticed because the process in general was much more time consuming. As digitization workflows evolve, previous practices simply cannot keep up with the newer, highly-efficient digitization workflows that follow them.

To combat the challenges that come with large-scale processes in recent years, Digital Collections staff have worked to streamline workflow and metadata processes so that collections can still be completed relatively quickly. Digital Collections' Metadata Application Profile has been drastically remodeled in recent years to eliminate guess-work for students when creating item-level metadata; if the information is nowhere within the collection, it is not captured, researched, or estimated. Still, the metadata that students are able to capture is high level and quite complex, with various opportunities in our Metadata Application Profile to capture relationships for linked data, to provide geographic coordinates, and to connect authority-level Uniform Resource Identifiers (URIs) within records across all of our digitized content. Students also contribute authorized terms into our many controlled vocabularies using a variety of approved thesauri and interfaces. As previously mentioned, the metadata profile is standardized and aligned with the profile of the local consortium, Mountain West Digital Libraries as well as the Digital Public Library of America. This standardization will help Digital Collections immensely when the department migrates to a new digital asset management system at the end of 2020. While students' work has become more advanced in recent years, the department has benefited immensely by creating more reputable digital records for online users *and* by teaching complex informational concepts to students who later use these transferable skills to be successful in their future careers.

Lessons Learned Checklist

Although Scholarly Communication Initiatives and Digital Collections have utilized student workers for different tasks and have different challenges, major themes about student worker management are shared in both departments. These lessons learned can help other divisions or institutions who are considering hiring student workers or who already employ students but are interested in incorporating them into more essential processes. Our recommendations are not one-size fits all, but they can be molded to an organization's needs to be mutually beneficial to both the department and the student.

1. Have clear expectations for the student worker position and identify specific skills to hire for.

Is the job primarily data entry?

Attention to detail and comfort with a computer are critical skills.

Does the work involve writing narratives?

Grammar and punctuation skills should be assessed before hire.

Does the position require complex problem solving with the potential for dramatic consequences if workflows aren't followed?

Communication skills and following procedures are necessary for success.

2. Consider that positions will evolve over time; have alternative plans in place for multiple areas in the department where students might be able to contribute.

The sustainability of the position must be considered: Is this work temporary, or is there a way to incorporate students into achieving the long-term goals and strategic plans of your organization?

3. Designate a dedicated person in the department to manage the students and their work, rather than having students report to multiple people.

Student supervision requires constant review of work, availability to answer questions on a one-on-one basis, and the overhead of managing administrative responsibilities like scheduling and pay. Having one point person allows a clear channel of communication and reduces confusion and misunderstandings.

4. Create documentation written to a student audience, and revise it often!

For processes that require following set steps, create documentation that is easy for students to understand and leave out library/technical jargon when possible. When training, ask the student to speak up when a step is unclear and ask them what words they might use to describe a challenging procedure. Include screenshots whenever possible, invest in training whenever a procedure changes, and be open to ongoing revisions.

5. Mentor and support the whole student to increase your return on investment.

Students are more likely to stick with a job, even a tedious one, when they know that their academic and personal success is just as important as their employment. Being understanding with scheduling and workloads during times of high scholarly stress (like midterms and finals) will be appreciated and returned through quality work produced. Investing in training and increasing responsibility throughout the course of the job also allows the student to grow with the work and means they can contribute later to more complex tasks.

6. Help students translate and practice describing how their work in the library transfers to skills and knowledge they can use in the job market.

Creating a first, post-graduate, resume can be a daunting task. Offering help to students in describing their experience in the library to other potential employers will be appreciated by many students entering the job market as they graduate and leave library employment.

7. Make it fun and celebrate success!

We were all students once! Remember that students are always appreciative of treats / food, approved breaks to chat with each other about non-work topics, release time to

participate in occasional student-focused campus events, short departmental parties to celebrate birthdays or accomplishments, and if nothing else: a simple, direct “thank you”.

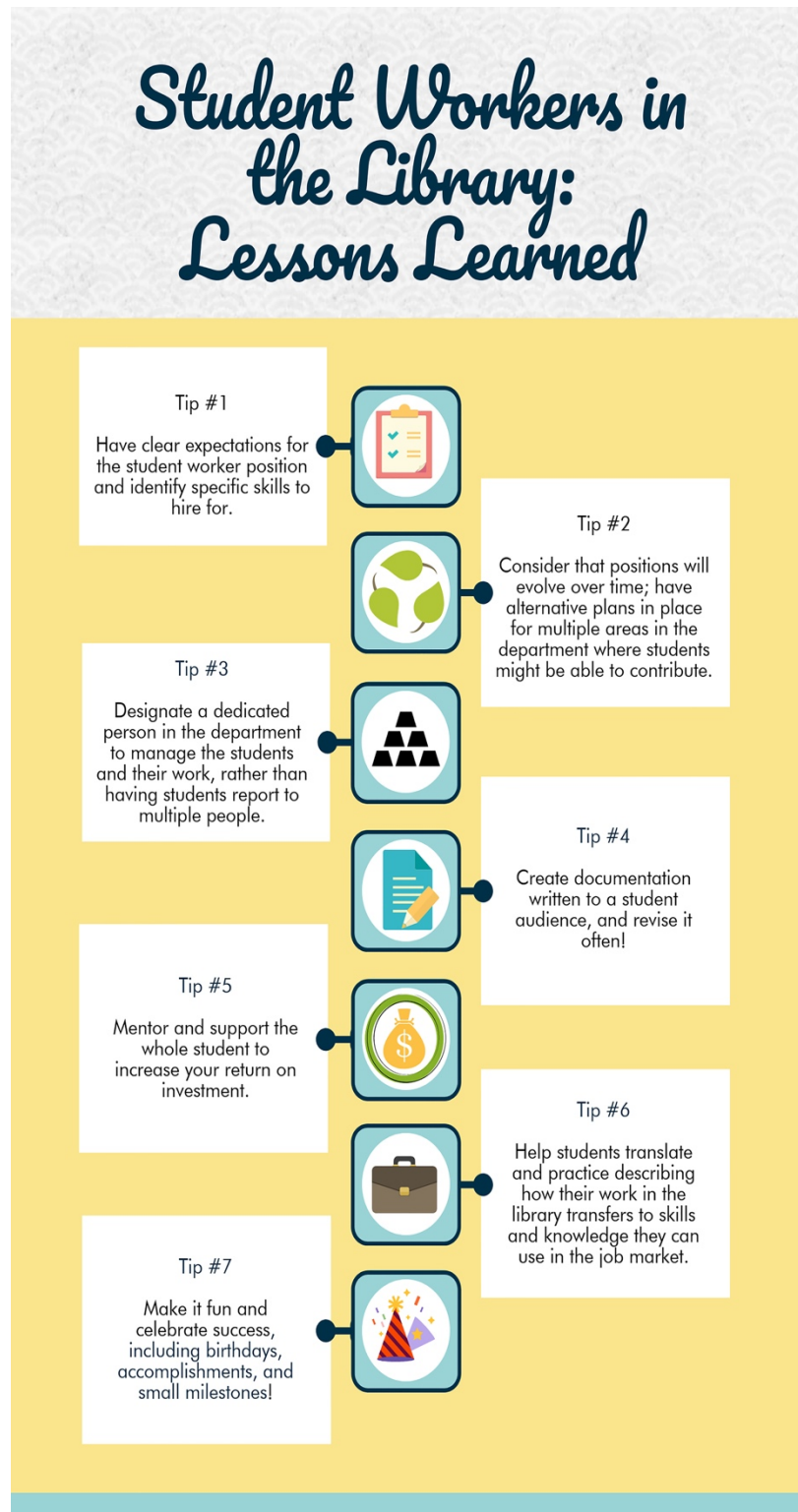


Figure 1. Student Workers in the Library Checklist

Conclusion

Scholarly Communication Initiatives and Digital Collections have successfully adapted staff workflows to become student-centered, increasing outputs dramatically and creating advantageous environments where both staff and students benefit from this work exchange. Students learn technical and transferable skills in these roles, free permanent staff time to work on higher-level projects, and are able to thrive in a work environment that promotes professional, academic, and social growth. While these workflows have come a long way from inception, the evolution of student employment in both departments is far from over, as change is a constant in this type of work. Technology continues to advance and create new opportunities to improve upon existing procedures, and opportunities to expand departments, repositories, and digital asset management systems mean that there will *always* be more for students to learn and to contribute to. Nonetheless, both Scholarly Communication Initiatives and Digital Collections wouldn't be nearly as successful in contributing to UNLV University Libraries' goals had it not been for the integration of student assistants into everyday processes and long-term plans.

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