

REDESIGNING REFERENCE SERVICES FOR ACADEMIC SUCCESS

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INTRODUCTION

Historically, one goal of reference services has been to support student academic success. However, results from academic help-seeking literature in higher education suggests that students who need support the most are often the least likely to seek it.¹ Other research findings have found that students from lower socioeconomic backgrounds may be less likely to use the library at their institution.² Academic libraries have an opportunity to face these challenging facts head on. One way to concretely improve the ability for all students in higher education to succeed is to consider redesigning the traditional reference service model to be focused more on student learning and success.

This paper will describe an effort at a large, midwestern university library to redesign references services into a unit more purposefully working towards student academic success, including the creation of a peer-to-peer coaching program using student reference staff. While this effort is ongoing—we highlight three important aspects of this reference redesign: 1. utilizing campus-networked data; 2. leveraging existing skilled labor, namely student staff, to create a peer-coaching program; and 3. shifting towards a proactive mindset where libraries actively engage with communities we seek to support.

There are myriad ways for academic libraries to provide students in higher education more equal opportunities to succeed. The authors describe an opportunity to re-imagine reference services for the 21st century where libraries are integral for the success of students who are historically underserved and under-resourced. In this paper we will discuss a nascent effort towards this goal—showing one pathway to create sustainable and scalable strategic programs in this area. Academic libraries, or individual units like reference services, cannot solve all equity, diversity, and inclusivity (ED) issues. Yet, we argue that reference services have the opportunity to intentionally and creatively address such problems.³

THE CORE PROBLEM: WHAT IS THE GOAL OF REFERENCE SERVICES IN THE 21ST CENTURY?

The core responsibilities and function of reference services in higher education remain. They are to help users navigate and use library resources effectively to enable original research, teaching and learning, and service—essential objectives of most colleges and universities. This goes beyond simply helping users navigate library websites. For instance, the concept of “reference” has extended into considering both virtual and in-person services as *learning environments* for at least the past two decades.

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Elmborg argued that “the reference desk can be a powerful teaching station—more powerful, perhaps, than the classroom.”⁴ At first blush this is a controversial claim as most instruction takes place in a formal classroom environment. Ward argues that “There is a learning imperative inherent in reference, where librarians seek not just to provide facts or answers to users, but to take advantage of the teaching moment that these encounters provide.”⁵ Students in a reference interaction are at a point of need and the opportunity is ripe for helping students develop their own process to find, evaluate, and effectively use information or data in a disciplinary environment. It makes sense that reference services can be tied to information literacy (IL) instruction.⁶

It is worth noting that while some scholarship argues that “the need for specialized knowledge at the desk has decreased”⁷ this does not detract from the increasing importance of instruction to reference services. While reference questions at a physical desk may become less important for reference—chat reference services may be playing an increasingly important role in facilitating student learning. There is an extensive scholarly record since the early 2000s of providing instruction during reference interactions, especially on virtual chat interactions.⁸ Epps et al. argue that staff reference training should be an ongoing process responsive to the needs of front-line staff⁹ which is commonsensical as user needs will change over time.

Effectively this means that the utility of reference services may continue to evolve. This can take various forms beyond reference staff waiting behind a physical desk or office space waiting for a virtual chat to pop up. Some recent scholarship argues that reference can be more strategically aligned with student learning goals¹⁰ and provide examples of ways to measure reference work in relation to student learning as opposed to usage or user satisfaction data.¹¹ This is a particularly interesting development as it prompts the question—what is success for reference services in the 21st century? Perhaps most importantly, how should library staff, administrators, and other stakeholders prioritize the various goals of reference services? In this paper we argue that one priority should be in aiming to demonstrably improve the ability for all students to succeed academically which may require conceptualizing reference services, or its main priorities, differently than before.

In practice this would require reference services working toward specific and measurable teaching and learning goals both at the reference desk, but also beyond it, for specific student populations that have historically and continue to encounter obstacles to their success. Consider the fact that there are demonstrable achievement gaps across different student populations¹² as well as research suggesting that college students who encounter threats to their self-esteem (e.g. not understanding certain assumptions about writing a lab report) are less likely to seek help.¹³ As “seeking help is inherently social” there are aspects to reference services helping students beyond learning or information literacy theory.¹⁴

Accordingly, there is an opportunity for reference services to function *primarily* for student learning, with the more precise aim of addressing (not solving) known issues of inequality of educational outcomes for a specific set of student populations. It will also involve meaningful partnerships with campus partners to intentionally, and ethically, use campus data to provide evidence of the efficacy of this aim. Lastly, this will necessarily entail leveraging existing knowledge, skills, and abilities of reference staff (which can include full-time, part-time, and student employees) towards new goals and projects.

Next, we will detail the academic environment of reference services and then discuss the specific efforts towards such an approach to reference services at a large university.

STUDENT SUCCESS AND LIBRARY SERVICES OR RESOURCES

There have been numerous recent efforts to investigate the relationships between use of library resources, services, and activities with student success data including GPA, retention, and graduation rates. A 2011 study involving 200 courses in one university provided evidence that students who borrowed library materials and accessed electronic resources achieved better grades.¹⁵ One study from the University of Minnesota suggests that use of library resources and services were positively associated with first-year students’ GPA and retention compared to peers who did not use such services.¹⁶ Other studies have found that participation in library instruction was related to students’ GPA.¹⁷ Findings from Croxton and Moore’s excellent 2020 article involving 70,000 student records from one institution “suggest there is a significant, positive relationship between engagement in library, co-curricular, and extracurricular activities and student success.”¹⁸ While many of these analyses are cor-

relational, in aggregate they provide increasing evidence for a relationship between use of library resources and services with various metrics of academic success. There is a vibrant research agenda in academic librarianship probing the relationship between academic libraries and student success.

ETHICAL USE OF DATA

A 2019 study found numerous instances of problems involving learning analytics research in academic libraries such as “lack of informed consent, and sharing of patron-identified data.”¹⁹ It is integral to the success of using student data, and large amounts of it, to be deliberate and intentional. There are already existing methods to do so.²⁰ Yet challenges persist because learning analytics, as performed currently, challenge existing “professional norms, policies, and privacy protection.”²¹ However, avoiding using learning analytics “may limit a library’s ability to serve students’ educational interests.”²² To use large swaths of campus data well requires academic librarians to weigh legitimate concerns of privacy and informed consent with the possible benefits of providing empirical evidence of advancing student success for marginalized students. While such a broad topic is out of scope of this individual effort, the authors contend that striking a balance is possible. Viewed from another angle, relevant stakeholders (like university administrators) expect academic libraries to “demonstrate evidence” of achieving specific desirable outcomes.²³

INFORMATION LITERACY AND ACADEMIC SUCCESS

Other studies have investigated the relationship between information literacy instruction or programming as it relates to course-level grades.²⁴ One study using multiple linear regression analysis involving 3,000 students found that students who “synthesize information and communicate the results, and do so frequently throughout a semester, may be more motivated to learn disciplinary content and have a greater chance of achieving higher course grades.”²⁵ Another study by Flierl et al., in testing a new instrument to measure information literacy, used a dataset of 5,000 students and found relationships between IL and measures of student learning like motivation, learning climate, and course grade. In sum—such studies evidence the ability of academic librarians to strive for helping students achieve not just library-related goals, e.g. using library resources, but also to aid students to achieve disciplinary learning goals, e.g. using information or data in ways that high-achieving scientists, engineers, psychologists, and historians do.

Large datasets involving thousands of students may be necessary to produce the kinds of statistical analyses necessary to provide evidence to campus stakeholders like administrators who have to balance competing programs and priorities. The cost of certain programs may be clear but the value they bring to strategic goals may not be. There is a clear gap in the existing literature in this increasingly important area of assessment and academic librarianship. How to support academic success in ways that are equitable and address long-standing issues pertaining to certain disadvantaged student populations? Some guideposts in this area are clear—a proactive approach, responsible and intentional use of campus data with library data, and leveraging existing resources and labor as a substantial influx simply cannot be relied upon. It is to a particular study of these issues that we now turn.

LEVERAGING EXISTING LABOR

First, we leveraged our existing labor, mostly comprised of student staff, to create a pipeline from students who only answered reference questions to becoming peer-research coaches—providing one-on-one instruction to student requiring research assistance for coursework. This provided a dual purpose for our reference services—where helping users navigate library resources is both valuable for its own sake and valuable for training students to utilize library resources in coaching or instructional settings. We found that students with a semester or two of reference experience were both ready and eager to use their expertise in new and challenging ways. We structured the reference positions as entry level and an opportunity to develop the knowledge and skills for a more advanced position as a peer-research coach. It is possible that such opportunities motivated students and yielded better performance while performing reference duties.

The second strategy was to leverage the knowledge and talents our students bring to their positions. We strategically hired students with a variety of strengths and experiences with the expectation that they will contribute to the growth and success of reference and peer-coaching. For instance, a student who is skilled at creating videos may take on a project to develop self-service videos on how to navigate the library website. A student taking coursework on inclusive communication may lead a session for their peers on best practices for communicating with a diverse population. More generally, a student who tends toward strong organizational skills may take on reorganizing our training materials, or a student with an interest in data may evaluate our reference statistics to aid in staffing decisions. By leaning into our students' strengths and leveraging our existing labor, we can accomplish far more and provide our student staff with opportunities to apply their skillsets in a work environment.

The third strategy within this specific aspect to the reference services re-design is to develop leaders who will train the next cohort of peer coaches. Instead of staff leading the training of peer coaching, peers lead the training. This provides students with the opportunity to develop leadership skills, leading to more authentic training as they are the ones executing peer coaching. This also helps make such a program more sustainable and scalable.

SHIFTING TOWARDS A PROACTIVE MINDSET

The reference redesign also required a shift in attitude and approach. Instead of waiting for users to approach reference staff with questions, we actively engaged with strategic partners on campus to put ourselves in front of students to ensure we were engaging with the very community we seek to support. Waiting for students to seek out research support may unintentionally leave out students who need support the most. By fostering strategic partnerships and embedding ourselves in classrooms, we were able to reach more students, including those who may not otherwise seek support. While not necessarily a new approach—this was considered a top priority as a reference service point. Priorities and resources within the reference unit were consistently weighed against this goal.

Our approach to engage with strategic partners included building partnerships with several academic success units across campus, subject specific and technology tutoring centers, and instructors of writing and general education courses. We did so to promote our services, share strategies and resources, and problem solve issues related to tutoring and coaching during the pandemic. This allowed opportunities for reference staff to collaborate on presentations at new student orientations and workshop series to promote a holistic approach to student support. At a large university with approximately 47,000 undergraduate students, it can be difficult to locate and utilize resources. These collaborations expanded student awareness of research coaching as a student academic success resource and allowed us the opportunity to be included in campus-wide conversations about student academic success.

Our strongest partnerships were with the writing center and an academic coaching unit. We created a space in the library where all three service points could provide one-on-one student support in an accessible area. Although not yet realized, our goal in bringing all three services together in one space was to make referrals in the moment by walking the students over to someone who could help them in real time. This removes the burden for students of scheduling on their own and increases the likelihood that the student will utilize the resource. This may be particularly impactful for students who are less likely to seek support. Moreover, these support services are interconnected. A student who is seeking help from the writing center may disclose challenges finding appropriate resources and procrastinating on an assignment, areas that research coaching and academic coaching can support, respectively. By having all three in the same space, we are creating opportunities for students to receive more holistic support.

Another strategic partnership that was integral to lowering the barriers to research coaching access was partnering with instructors and embedding our peer coaching into courses. Again, our concern was that students may not seek help for research coaching just by being aware of the service and we recognized that students who need support the most might be the least likely to seek it. Furthermore, research has suggested that students can be overconfident in their information literacy abilities leading them to think they do not need

help and they may avoid asking questions because they are unsure how the service will help.²⁶ To develop this partnership, we approached instructors who taught first- and second-year writing courses or general education courses with a research component. Instructors picked the assignment they perceived to be the best fit for research coaching and (in most cases) required students to meet once with a peer research coach as part of the assignment. This proved to be effective for several reasons: 1) our peer coaches had advanced knowledge of the assignments allowing them to be better prepared for the sessions, 2) students had access to support at the point of need and before the assignment was due, to best support their success, 3) students who were overconfident coming into the appointment realized they still had gaps in their knowledge and found they learned a great deal during the sessions, 4) students who did not have previous experience with the library learned skills and strategies for navigating library resources that they otherwise may not have learned, 5) it lowered the barriers to access as students did not have to seek out our service and increased the likelihood that students would attend, and 6) it lowered the stakes of asking for help as it was clear that another student, a “peer,” would be working with them.

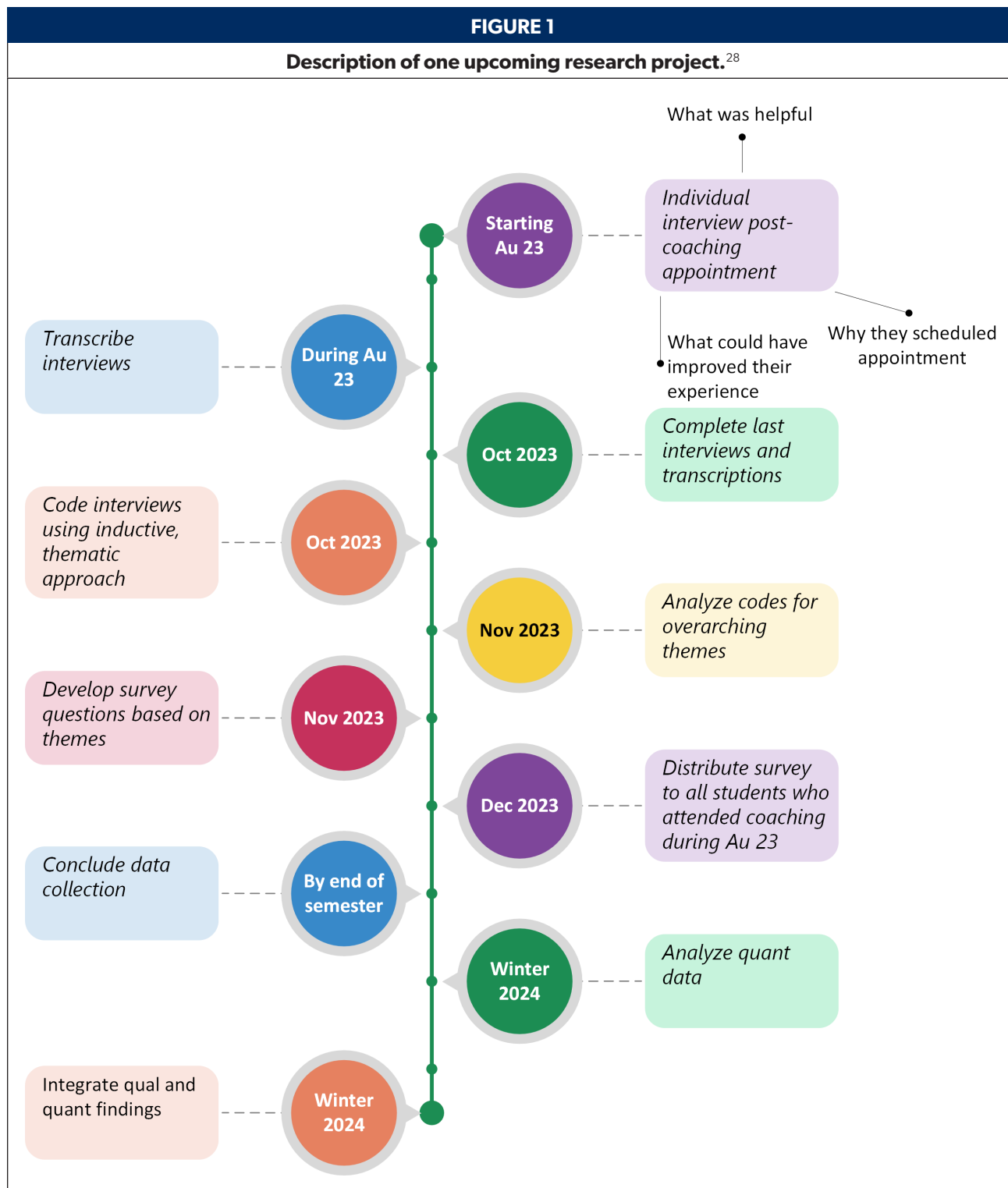
Advancing student success, in our context, meant that reference services had to get out of the library.

UTILIZING CAMPUS NETWORKED DATA

The authors also began collecting coaching data through a university system used by other student success units on campus. The units on campus using this system included academic coaching, advising, tutoring, instructors, as well as other support services. Data available to users of the system include past and current course enrollment, course grades and attendance, assignment grades, GPA, total credits earned, courses withdrawn, first generation status, commuter status, major, age, and gender. Using the data available, we can create campaigns to reach out to students who have success markers indicating they could use support and offer our services. In addition, scheduling is integrated into the system and automatically tracks appointments scheduled, cancelled, and attended. This campus-networked data allowed us to ask questions like: 1. What are the demographics of the students who attend coaching sessions? 2. How many appointments do students attend? 3. What other services are they using, such as academic coaching or the writing center? 4. Do students considered in need of high support (as designated by the university) use our services? Over time, we will be able to ask questions like: 1. Is utilizing research coaching linked to course grade or GPA? 2. Does attending more than one coaching appointment have a bigger impact on GPA than attending just one? 3. Do students who attend more than one academic resource (such as writing center, academic coaching, tutoring) have higher GPAs than students who only attend research coaching? 4. Do students who attend coaching do better on their research assignment than students who do not attend coaching?

Our preliminary data suggests students prefer virtual coaching to in-person coaching sessions as 80% of our students opted to schedule their appointments virtually. Of the students who registered to attend ($n = 178$), 53.1% were first-year students, 28.8% were second-year students, and 18.1% were third-year students. Slightly more than half of registrants identified as male (55.4% male; 44.1% female; .6% did not identify). The race/ethnicity of students who registered were: 2.8% Asian, 8.5% Black, 6.8% Hispanic, 4% multiple races, 63.1% white, and 14.8% identified as international with no specific race/ethnicity listed. The average GPA of students who attended ($n = 159$) was 3.38, with GPAs between 3.0 and 3.9 accounting for 85.1% of students and .4% holding a GPA below a 2.0, 12.9% holding a GPA between 2.0 and 2.9, and 1.6% holding a 4.0 GPA. This is consistent with the academic help-seeking literature that suggests students in the 2.0 and 3.0 range are more likely to engage in academic support than students at the high end (4.0) or low end (1.0).²⁷

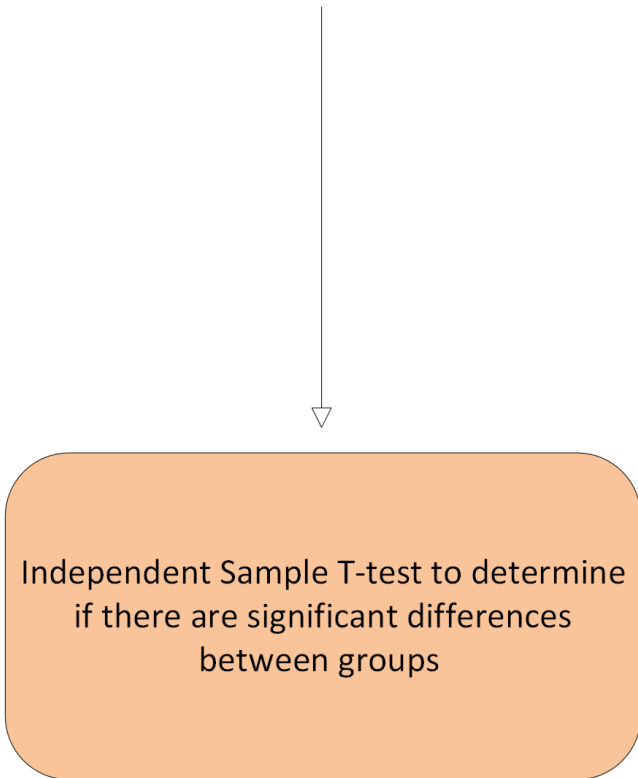
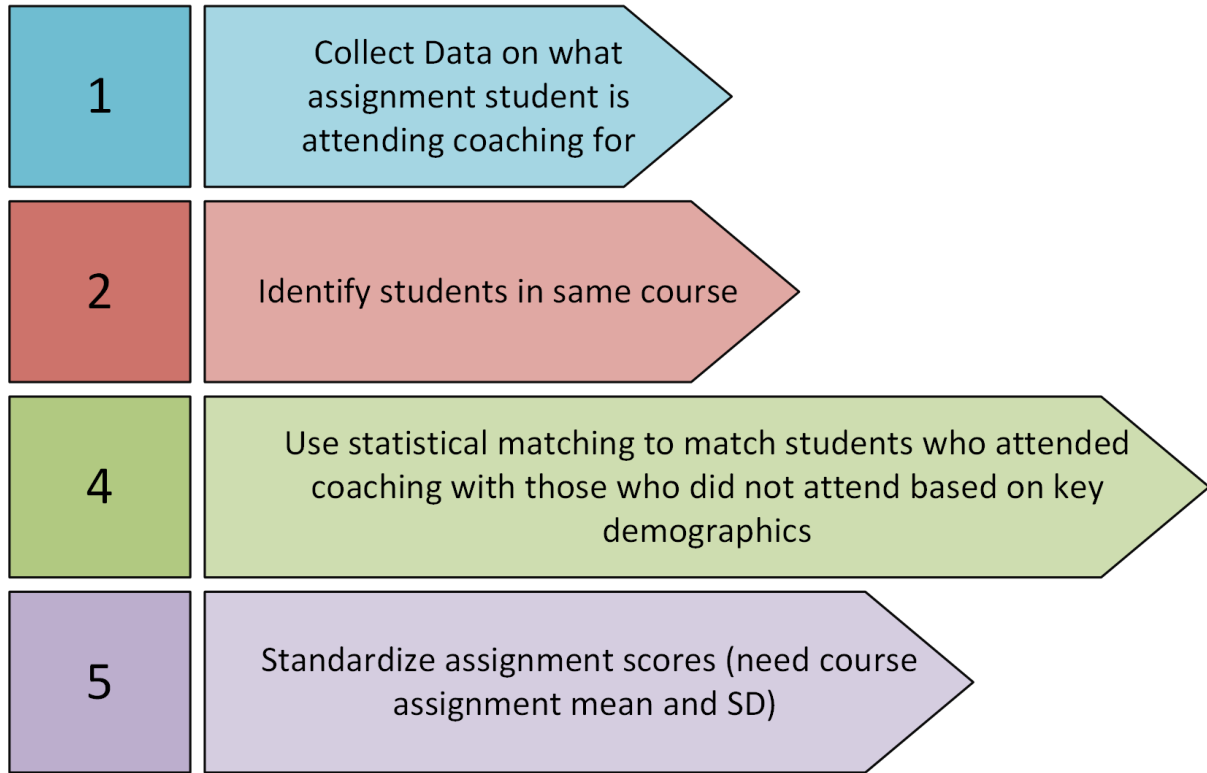
Next steps for evaluation and assessment of reference research coaching include conducting and analyzing post-coaching appointment interviews to understand what students find helpful and identify program improvements. The findings will also be used to develop a survey based on themes that are identified in the analysis. Survey responses will be merged with student data, another benefit of utilizing campus networked data. This will allow us to look at demographic differences in survey responses and control for variables, like prior achievement, when examining research coaching outcomes. See Figure 1 for a visual of this effort.



We also aim collect data on what assignment the student seeks coaching for, and using the data available to us, identify students in the same course who did not attend coaching. We can then use statistical matching based on key demographics to match students who attended coaching with students to did not attend coaching. Using assignment scores, we will conduct an independent sample T-test to determine if there are significant differences between groups. See Figure 2 for a visual description of this research project.

FIGURE 2

Description of a Second Research Project Outline



CONCLUSION

Reference services have an opportunity to work towards worthwhile EDI goals related to student academic success. This will likely require new approaches to staffing—thinking about how to create “pipelines” to utilize skilled reference staff towards other endeavors and initiatives like peer-to-peer services. Additionally, a proactive, entrepreneurial spirit will be required to find active and willing collaborators for such student success goals. It takes time to develop such relationships and so difficult discussions may be required to consider the necessary trade-offs for such relationship building. Finally, evidence must be collected if this new shift in reference services is to last in any meaningful sense. Resources devoted to academic libraries are in competition with other units and initiatives. Busy administrators require evidence to make informed decisions. How to collect data in ways conducive to the desired end goal of more students having an equal opportunity to succeed while avoiding the many pitfalls of large-scale data collection is yet to be seen—but it is worth pursuing.

The opportunity for reference services to become more valuable and relevant to student success in higher education is possible and desirable. This paper attempted to show an initial attempt at just such an effort. We hope to inspire others to reconsider what reference services are for and what heights it could achieve as a service point in academic libraries while being cognizant of the tradeoffs such an approach would require.

NOTES

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