

Librarian as Advisor: Information Search Process of Undecided Students and Novice Researchers

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Faculty librarians who advise undecided students have found the experiences of novice researcher and advisee comparable: Both groups seek to solve a problem or answer a question by finding new information to add to their current understanding and knowledge base. As a result, librarians familiar with needs and stages of the research process may flourish as advisors to undecided students. In this article, we draw parallels between the needs of novice researchers and those of undecided students, and we advocate the use of an information-search model for all advisors working with undecided students.

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Guiding undecided students through the array of curricular options and helping them deal with a range of emotions requires specific advising skills and knowledge. At our institution, faculty librarians who also advise undecided students have found that they utilize similar skills when working with both advisees and novice researchers. The two groups of students share similar emotions as they face decision-making challenges and employ like processes to accomplish their goals; specifically, both researching and undecided students seek to solve a problem or answer a question by finding new information to add to their current understanding and knowledge base.

Therefore, librarians who are familiar with needs and stages of the research process may flourish as advisors to undecided students. Furthermore, they may benefit from Kuhlthau's (1991) model of the information seeking process (ISP), which focuses on the affective dimension of the research process. Kuhlthau defines an information need as "the gap between the user's knowledge about the problem or topic and what the user needs to know to solve the problem" (1991, p. 362). Kuhlthau's theories provide the foundation for the two assertions we make in this article: The needs and experiences of students navigating the research

process and those seeking direction on a major and career parallel each other such that librarians possess the necessary training and skills to meet the needs of both groups. Furthermore, Kuhlthau's groundbreaking ISP model provides valuable insight to advisors working with undecided students. We draw evidence for these claims from information on librarians' training, comparisons of professional standards, and most significantly, our personal experiences with the two student cohorts. Bringing together the conversations from academic advising and library science, two disciplines not commonly associated, brings to light areas for compelling, innovative campus collaboration.

Background on Librarians

At our institution, librarians serve as 12-month nontenure track faculty members and hold the Master of Library and Information Science degree (or equivalent), a terminal degree according to the American Library Association (ALA), Association of College and Research Libraries (ACRL) (2011b). In the master's programs, curricula vary by institution, but most feature a similar set of core courses including a foundations class about information history and theory as well as courses on information seeking (reference services) and organization (cataloging). The core courses paint a picture of the ever-changing information environment, instilling a unique perspective on both practical and theoretical aspects of information. A large component of graduate library programs is comprised of internship and practicum opportunities in which students learn customer service skills directly from experts in the profession. The core courses, along with relevant electives and practicum experiences, provide students with an advanced understanding of collecting, organizing, providing access to, and finding information. This combination of education and training, necessary for librarians, also applies to other disciplines, such as advising, in which accessing and interacting with various forms of information prove critical to successful educational outcomes for students assisted by these professionals.

As faculty members, librarians actively teach, engage in scholarship, and embrace service. However, until recently, at our university, they differed from classroom faculty colleagues in that they did not shoulder advising duties. In 2011 the advising structure was changed, and librarians were asked to take over advising of undeclared students, a task previously undertaken by a team of faculty members across the disciplines. Administration saw that librarians possess personalities and skill sets well suited to working with undeclared students, and that, as faculty members, librarians should share advising responsibilities. While not all librarians welcomed the additional duties, all agreed that their training and proficiencies naturally fit the role of an advisor.

Librarian as Advisor

To set the stage for the discussion of librarian as advisor, we looked at both library and advising literature. Searches in customary library and education databases and Google Scholar for articles on librarians as academic advisors returned limited results, with even fewer focusing specifically on librarians as advisors to the population of undecided students. In a 1990 essay, Sisoian and Hall described a number of advantages to employing librarians to work with undecided students. First, as generalists, librarians possess familiarity with disciplines and curricula across multiple areas, but claim no stake in advocating for a particular major. This neutral stance proves helpful in presenting the spectrum of opportunities available to undecided students. Second, Sisoian and Hall noted that the addition of librarians to the advising pool relieves faculty member schedules so that more time is devoted to each decided and undecided advisee.

Studdard (2000) described his experience as a librarian advisor at Millersville University, where faculty members volunteer to advise undecided students. Studdard explained the skills and resources that academic librarians can use to aid students in their search for a major. He also reflected on the benefits the librarian can experience as an academic advisor, in particular “the feeling of accomplishment that comes with helping a student choose a direction to take in his or her life and career” (p. 781).

Young (2008) discussed the Council for the Advancement of Standards in Higher Education (CAS) for Academic Advising and ACRL Information Literacy Competency Standards for Higher Education. Using these national standards, Young

drew parallels between academic advising and academic librarianship, pointing out the similar roles that advisor and librarian play in the development of a student. Kelleher and Laidlaw (2009) described participation in a first-year experience advising program at the University of St. Thomas. They established relationships with students that reaped benefits later when those same students needed research assistance and were comfortable interacting with someone they already knew and trusted. They also found that “the librarian naturally falls into the role of advisor through experience in answering reference questions about all aspects of the university and long experience helping students bewildered by university life” (pp. 161–162).

Most recently, Flatley, Weber, Czerny, and Pham (2013) described their experience at Kutztown University of Pennsylvania, where librarians advise undecided students. While they do not correlate advising with reference services, these authors related advantages to working as academic advisors, outside of their roles as librarians, with undergraduates. Advising allows them to spend more face time with students, getting to know their challenges in adapting to college. In learning about general education and major program requirements, policies regarding schedule changes and financial aid, and campus software programs, the librarians gained new insights that added a dimension to their faculty status.

Characteristics of Undecided Students and Novice Researchers

Undecided students and novice researchers share many of the same characteristics. Despite applicable generalizations often made about undecided students, each presents unique reasons for being undecided and differ in their levels of indecision. Gordon and Steele’s (2003) 25-year longitudinal study of over 19,000 undecided students revealed that 22% were completely undecided, 31% were tentatively decided, and 43% had “several ideas but were not ready to decide” (p. 23).

In their qualitative study of advanced undecided college students, Hagstrom, Skovholt, and Rivers (1997) found that many undecided students expressed hopelessness, anxiety, and frustration. These emotions can become more or less intense as students seek clarity on a major. Two main factors influence the negative feelings: parents who ask about progress toward a decision and peers who seem to be confident about their career goals.

Undecided students often feel embarrassment, self-doubt, and inferiority as they consider the way they appear to others. However, indecision does not always carry a negative connotation. Undecided students may demonstrate intellectual curiosity and creativity (Gordon, 1984) because of their diverse interests that make choosing difficult. Students may see declaring a major as closing off options and do not want to limit access to opportunities (Hagstrom et al., 1997).

The literature concerning characteristics of novice researchers remains scant. However, Kuhlthau's studies provide details on the affective characteristics displayed as the person initiates the ISP (1991, 2008). Kuhlthau suggested that "uncertainty and anxiety are an integral part of the process, particularly in the beginning stages" (1991, p. 361). When first undertaking a research project, students may feel overwhelmed by the volume of information available to them and may not know where to begin. We have observed that the same bewilderment comes across undecided students at their first college orientation when they are introduced to numerous sources of information: class schedules, the university catalog, the general education requirements, and their own course audits. Comprehending these tools, which they had not previously encountered, seems a daunting task.

However, rather than cause anxiety, the information overload may excite creative students with multiple interests; their challenge is choosing only a few paths to explore rather than not knowing where to start. As students progress through their first semester, they are exposed to various courses, disciplines, and types of research assignments. Such experiences help to develop confidence in their abilities to make decisions about their own personal research capabilities and choices of majors.

The significance of relationships between librarian and researcher as well as those between advisor and advisee becomes clear as many students need assistance improving decision-making skills. However, some fail to seek help from faculty members, relying instead on friends and relatives. When conversing with undecided students and novice researchers, advisors who purposefully engage in the advisee-advisor relationship influence the learning outcomes and decision-making process. Because of the importance of relationship building, Crookston's (1972/1994/2009) description of developmental, rather than prescriptive, advising applies to both advising and researching scenarios. According to the

developmental relationship model of advising, both parties can take on the role of teacher as they "engage in a series of developmental tasks, the successful completion of which results in varying degrees of learning" (Crookston, 2009, p. 79). Through this framework, the librarian can learn from the novice researcher just as an advisor can learn from an advisee. In both advising and researching situations, the librarian advisor wisely acknowledges that "the student's potentialities for growth are yet to be discovered" and that the resulting goals for her or him "must be self-committed rather than imposed by others" (Crookston, 2009, p. 79). With these principles in mind, librarian advisors recognize that persistence supplies a key element in successful advising and research processes, particularly amid the natural confusion and indecision of the student, and ultimately results in positive personal growth.

The Information Search Process

Studies that address student advising often illustrate decision-making models and the stages of the advising session. Steele (2003) summarized and compared four different decision-making models (by Gordon, Schein and Laff, Beck, and Bertram). The common characteristics of the models included the importance of trust between parties, advisor awareness of students' cognitive and affective domains, and the need for advisors to take a holistic approach not limited to academic concerns (p. 14). Library literature does not focus on decision-making models, but rather on information-seeking behaviors. While decision making and information seeking do not reflect the same goals, the processes remain comparable, and both contribute essential elements to a student's overall development.

Kuhlthau's (1991, 2008) ISP model remains one of the most frequently cited works in library and information science. A series of five studies looking at researchers in information-seeking situations brought to light the gaps between the ways they sought information and the typical organization of it (Kuhlthau, 1991, p. 361). The ISP is based on the premise that the individual gathers data from various sources, both formal and informal, and that this information is assimilated with prior knowledge, allowing the researcher to ultimately develop a critical understanding. The six stages in the ISP are defined by initiation, selection, exploration, formulation, collection, and presentation. Each stage relates to a particular task in which the researcher exhibits different

Table 1. Summary of Kuhlthau's information search process

Stage	Description
Initiation	A lack of knowledge or understanding leads to feelings of uncertainty and apprehension.
Selection	A general area, topic, or problem is identified and initial uncertainty gives way to optimism and readiness to begin the search.
Exploration	Inconsistent, incompatible information is encountered, and uncertainty, confusion, and doubt frequently increase such that confidence wanes.
Formulation	As a focused perspective is formed, uncertainty diminishes and confidence increases.
Collection	Pertinent information is gathered and uncertainty subsides as interest and involvement deepen.
Presentation	The process is completed and a new understanding can be demonstrated through explanations and applications of the knowledge acquired in the process.

Note. Kuhlthau (1991, pp. 366–368)

characteristics. The basic affective, cognitive, and physical components experienced in each stage, as identified by Kuhlthau (1991, 2008), are displayed in Table 1.

While advising undecided students and assisting novice researchers, we realized that the information needs for these groups differ, but the process of meeting the needs shows similarities. Both student groups not only seek new information, but also want to construct meaning from that information (Kuhlthau, 2008). Not all students who seek research assistance function at the same ISP stage, just as not all undecided students demonstrate the same level of indecision. Therefore, determining the ISP stage when advising or assisting with research constitutes an important first step. As Gordon and Steele (2003) explained:

It is important, therefore, for advisors to determine the level of indecision each student is experiencing, focus on the amount and type of information he or she requires, and support that student as he or she engages in the decision-making process. Helping the students themselves understand where they are in the decision-making process, and what they need in order to advance to the next step can reassure them that a positive and satisfying result is possible. (pp. 30–31)

Initiation

In the first stage of the ISP, initiation, information seekers may show apprehension about the research process because they do not know how or where to begin their search (Kuhlthau, 1991, 2008). Librarians who assist novice researchers try to determine the types of information needed.

Questions that elicit students' interest in the topic, motives for researching it, and arguments the students want to make will provide the librarian with clues about the best resources to suggest. Similarly, students undecided about their future career paths will exhibit anxiety on several levels: uncertainty about planning a schedule, unease with peers who have already declared major courses of study, and fear of falling behind and not graduating from college at the projected time.

At this point in the process, librarian advisors can implement the ISP model (Kuhlthau, 1991, 2008). They may ask students about their favorite high school subjects or the reasons they gravitate toward certain classes. Gordon and Steele (2003) also recommended discussing majors students are not considering and the reasons they do not wish to pursue them. The student response helps the advisor suggest potential courses for a student's first semester. As Gordon and Steele (2003) concluded, "Exploration through course work is perhaps the most basic and important advising tool" (p. 30).

Selection

In the second ISP stage (Kuhlthau, 1991, 2008), selection, researchers identify general topics for further investigation. Their optimism may grow as librarians help them to determine the plausibility of various options. As academic advisors, librarians can explain to advisees that general education courses count toward graduation requirements and allow them to explore their interests, thus reassuring advisees that they are not wasting time, money, or opportunity by taking non-major classes. Librarian advisors can further show the ways various general educational components fit into the overall educational plan such that students keep options open while making progress toward a decision. Advisees

facing inquiring parents and confident peers may take particular comfort in this explanation.

Exploration

In the third stage of the ISP model (Kuhlthau, 1991, 2008), exploration, researchers look at resources from which to gather relevant information for selected topics, causing some to return to an apprehensive and confused state because the volume of information available often appears overwhelming. In fact, as Kuhlthau (2008) observed, "New information actually increases uncertainty" (p. 68). Furthermore, the new information may not comport with previously held views or opinions, and thus may seem threatening to long held beliefs (Kuhlthau, 1991, 2008). Librarians can show researchers ways to narrow a search or a topic as well as encourage them to read a fair amount to acquire a solid understanding of the topic.

Undecided students, like novice researchers, experience a reemergence of confusion after gaining new knowledge, and as with the researchers, this disequilibrium signifies positive growth. According to Tinto (1993),

Movements from varying degrees of certainty to uncertainty and back again may in fact be quite characteristic of the longitudinal process of goal clarification which occurs during the college years. Not only should we not be surprised by such movements, we should expect, indeed hope, that they occur. (p. 41)

The librarian and advisor provide expertise and reassure researchers and advisees that their feelings of uncertainty do not signal failure or backsliding, but reflect a natural part of the growth process (Kuhlthau, 2008).

Even advisees willing to explore their general education courses may feel flustered for several reasons. Those with multiple areas of interest may struggle identifying introductory courses, narrowing down their choices, and fitting them into the first semester schedule. Conversely, others may be unable to articulate even one area of interest and become overwhelmed by the choices available to them. Librarian advisors possess training that makes them uniquely capable of leading students in one direction.

Students unconvinced of the usefulness of introductory courses may express discouragement when their first-semester choices do not immediately spark an interest in a major. As they interact

with peers who have declared majors, students may reexperience apprehension, and as a result, some seek premature closure, rushing into the choice of major to conform to their peer group; some of these will change their major later in their college career.

Kuhlthau (1991) noted this tendency to premature choice in the novice researcher as well. We have observed that student researchers often accept the first few sources they find and declare their research completed rather than evaluating those sources and continuing to search for more relevant and appropriate ones.

Formulation

At the fourth stage of the ISP (Kuhlthau, 1991, 2008), formulation, researchers typically begin to appreciate the process and select specific ideas and themes to form a focus that will gradually evolve. As they see progress in their research, they will become more confident in their information-seeking abilities (Kuhlthau, 1991, 2008). Likewise, as undecided students begin to identify courses and areas of study that appeal to them, they gradually weave these together into a choice of major and thus gain confidence and believe in their ability to persist in college. At this stage, librarian advisors will monitor students' choices to ensure they select courses that meet graduation requirements while preparing a course of study.

Collection

The fifth stage of the ISP (Kuhlthau, 1991, 2008), collection, characterizes the weightiest part of the research project. With a clear direction, information seekers can select appropriate sources, perhaps discarding some initial data that no longer relate to the focus. They grow increasingly clear about their needs and ability to locate information, and they typically will discuss their research projects with librarians (Kuhlthau, 1991).

Undecided students at a similar point in their progress toward declaring a major also can articulate their interests in specific studies and disciplines of interest. At this point at our institution, librarian advisors direct students to appropriate campus resources, such as department chairs, faculty members, and departmental admissions staff who can provide specific information about the requirements of the major and the application process for entering the department.

Presentation

In the final stage of the ISP (Kuhlthau, 1991, 2008), presentation, students show relief that they

have concluded the information-seeking process. They have assimilated new information into their existing bank of knowledge and can apply it to current and future projects (Kuhlthau, 1991, 2008).

For undecided students, the final stage culminates in the declaration of a major. Using the knowledge and experience gained in exploratory courses, students can confidently pursue their programs of study for the remainder of their academic careers. At our institution, the students go to new academic advisors who guide them in the specifics of the major requirements and prepare them to graduate.

Reference and Advising Interviews

Familiarity with the ISP (Kuhlthau, 1991, 2008) can foster meaningful advising and reference experiences. Librarians who provide assistance from the reference desk have been prepared specifically for such interactions. As graduate students, they have been trained to conduct the *reference interview*, characterized by a conversation between the librarian and the patron, whether in a public, academic, or other type of library. Brown (2008) stated, "Conducting a reference interview is the most important work a reference librarian does, because this enables the librarian to match the patron's question to a relevant and useful source" (¶ 5). Just as librarians match information needs to appropriate data sources, so advisors match student interests and program requirements to relevant courses. The librarian renders competent advice in both environments.

Library patrons do not always (or usually) ask the question they want or need answered (Knoer, 2011). For example, by asking the location of psychology books, a student does not necessarily need a simple call number or library map. The librarian will direct the student to the psychology books, but will continue with a question such as "Are you looking for something specific?" The answer to that question can point in a number of different directions: The student may need a specific title, at which time the librarian can teach the student to use the library's catalog; the professor may have told the student to "go to the psychology section," knowing the librarian familiar with the class can guide the student to the sources needed to complete the annually given assignment; the student may be writing a paper on a psychology topic and thinks that browsing the psychology books is the best way to begin. In all these scenarios, the response from the student informs the next step in the conversation. Librar-

ians typically elicit information that allows them to answer the underlying and obvious questions of students. The interview helps students define the information needed, and the librarian's instruction on locating and accessing the information naturally and efficiently follows.

Undeclared students may demonstrate vagueness in their mind-sets similar to that of the inquiring researcher; that is, they may be thinking about one or several particular majors and seek the location of information regarding each one or need to start a search with no predetermined focus. As with novice researchers, librarian advisors use the interview to encourage students to think specifically about general subjects such as the reason they find a subject interesting or unsatisfying and those in which they feel competent or not. As the interview progresses, librarians may ask questions about students' learning preferences, such as early morning or late afternoon classes and whether they feel confident about their level of self-discipline to take online courses. They encourage students to talk about their visions for a career and help them identify courses that will educate them in those areas of interest and provide them with new information, interesting content, and a resource in the course instructor who can speak to their interest in the field.

Just as they understand the catalog, databases, and other library resources, librarians also know the ways to appropriately meet each information need. As advisors, they prepare themselves with knowledge of the course catalog, class offerings for the semester, general education and program requirements, and online registration systems to guide students to appropriate and applicable choices. Whisner (2001) said that a reference interview calls for "a mix of skill, tact, intuition, and art" (p. 727). Advisors must demonstrate the same competencies.

The invocation of multiple skills and nuanced understanding may prove especially important with undecided students. Galilee-Belfer (2012) described undeclared students as needing more than schedule planning guidance. These students may not sufficiently understand college life in general, specifically the need to take ownership of one's course of study, apply self-discipline to succeed academically, and determine ways a major fits into one's future. Undecided students express differing levels of awareness about the multiple aspects of determining a major, not unlike novice researchers who may not have experienced the circuitous nature of scholarship. The outcomes do not emerge

from filling in blanks on a questionnaire, and librarians experienced with research guidance not only recognize these stages of student unpreparedness, they use the same skills as other academic advisors to educate students about options and decision making.

The library literature on interviewing frequently discusses rapport, approachability, and nonverbal cues between the reference librarian and patron. Students may not feel comfortable asking for help. Therefore, librarians must present a welcoming and friendly appearance, listen actively to patrons, and elicit specific information through questioning (Knoer, 2011). Although the content of an interview at the reference desk differs contextually from an advising interaction, the listening and questioning techniques remain the same. Undecided students, in particular, need advisors with whom they feel comfortable and will contact when the need arises.

Professional Guidelines

The interview processes in both advising and reference library scenarios are rooted in professional guidelines. NACADA: The Global Community for Academic Advising (2005) provides the Statement of Core Values of Academic Advising, which every advisor should embrace. The ALA also features guidelines and competencies, developed by the Reference and User Services Association (RUSA): *Guidelines for Behavioral Performance of Reference and Information Service Providers* (2013) and *Professional Competencies for Reference and User Services Librarians* (RUSA Task Force on Professional Competencies, 2003). The values and guidelines of advisors and librarians correlate in many ways.

NACADA stresses the provision of accurate and timely information and encourages effective communication between advisor and advisee. ALA guidelines note the importance of timely responses to requests for information and list effective listening and questioning skills as one of the five core guidelines for behavioral performance. Advising plays a role in a student's successful transition from high school to college (Bigger, 2005), and those in the academic library profession place much emphasis on transitioning students' research and writing skills from the high school to the college level. Advisors are required to offer encouragement, show respect, and provide assistance; these qualities comprise the first RUSA guideline: approachability.

Advisors involve others in the advising process when necessary and appropriate (NACADA, 2005). Similarly, within the research environment, generalist librarians refer students to subject specialists for in-depth research needs. Librarians comprise a natural part of the campus-wide network. They interact frequently with other faculty members and administrators as they deliver instruction, serve on campus committees, and participate in university governance. They are accustomed to working with the faculty in designing research assignments, and while assisting students in the library, they contact instructors for clarification of student research requirements.

Librarians and advisors alike support and promote their institutions' missions (ALA, 2011a; NACADA, 2005). In fact, the library exists primarily to support the mission of the parent institution. Therefore, librarians serve outside of the library in numerous roles, taking part in campus and community activities and establishing connections with students while increasing the library's visibility. Students who meet librarians as academic advisors encounter a nonthreatening experience that will prompt them to seek out those same librarian advisors when they need research assistance.

Finally, librarians are trained to help students cope with information overload, which characterizes the modern university with the wealth of information resources available both within and outside the library environment. Skilled in calming frustrated students, helping them navigate the sea of information, encouraging them to focus on specific aspects of research topics, and engaging with them as interested collaborators in their studies, librarians demonstrate the competencies applicable to guiding undecided students through the maze of course planning and scheduling.

Advisor as Librarian

Librarians at our institution have been advising since 2011. The first cohort of undecided students advised by librarians has not yet graduated; however, preliminary data indicate promising trends for retention and timely selection of majors. We plan to gather additional data to explore the impact of librarians as advisors beyond the anecdotal evidence we have collected to date. Although our role as advisors is still fairly new, we have learned many lessons that could benefit others who advise undeclared students:

- Students can feel overwhelmed with too much information, and therefore, advisors should initially present a few of the best options for advisee consideration.
- Students must ultimately take responsibility for moving through the ISP (Kuhlthau, 1991, 2008) while the librarian advisor supports and guides them both in the research and advising processes.
- Librarians with training in the organization of information from a user's perspective should use these skills to design advising materials that help undecided students organize their own thoughts and choices, give them a clear picture of their potential schedules, and present an optimal strategy for the registration process.
- During summer freshman orientation, advising sessions held in the library familiarize undecided students with their advisors' office locations and the library in general; this knowledge serves them well when they return to campus in the fall.
- Students need specific information at key points in the process, and those taking their initial steps typically cannot process information needed at advanced steps; likewise, undecided students do not typically need information in early advising sessions that they will need two years after they have declared a major.

Of course, librarian advisors need more than tips to implement the ISP (Kuhlthau, 1991, 2008) for undeclared students. To make an impact, they need to demonstrate and encourage motivation and interest.

Summary

Typically unassociated, the two fields of academic advising and library science could benefit from drawing on the theories and best practices of the other. The characteristics, information needs, and information-seeking behaviors of novice researchers and undecided students show many similarities. The six stages of the ISP (Kuhlthau, 1991, 2008) can serve as a new model for advising undecided students. Librarians familiar with Kuhlthau's ISP and the needs of novice researchers can naturally work with undecided students. We hope that, by making this comparison and providing insight from library-related literature and our own experiences, advisors of undecided

students can add to their skills in guiding students toward their future majors.

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