

A photograph of three people (two men and one woman) sitting at a long table in a modern office or classroom setting. They are looking at laptops. The man on the left is wearing a maroon t-shirt. The woman in the middle is wearing a brown knitted cardigan over a white shirt. The woman on the right is wearing a white sweatshirt. The background is a bright, out-of-focus office space with large windows.

Making Labor Market Information Meaningful: Insights from Student and Career Service Leader Experiences

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Background

Higher education leaders increasingly are using labor market information (LMI) – data on labor market trends, employment outcomes, wages, and in-demand skills – to align academic programs, advising, and career pathways with regional and national workforce demand, helping ensure that credentials lead to viable economic opportunities. When integrated into advising and curriculum design, LMI can support more informed major selection,¹ clarify career outcomes, and reduce uncertainty for students navigating complex postsecondary pathways.² High-quality LMI goes beyond general labor market trends to include actionable, student-level insights such as program-specific outcomes, credential pathways, and the skills and competencies that employers value. However, the value of LMI depends on how clearly, equitably, and transparently this information is translated into guidance, particularly for students who rely most on institutions to demystify career and earnings outcomes.³

This study examines how LMI is used in practice within higher education contexts. Specifically, it explores how career services professionals support students in connecting their education to career pathways, how students access and interpret LMI, and where opportunities exist to strengthen its use in institutional practice.⁴ Through qualitative interviews, this study aims to provide insights into how students access and use LMI, highlights existing strengths in career services and institutional support, and identifies opportunities for institutions to enhance guidance that helps students make informed decisions and navigate the transition from education to meaningful careers.

What Counts as Labor Market Information?

- Occupational demand and growth projections
- Wage data and earning potential
- Required education, credentials, and certifications
- In-demand technical skills
- Regional and local labor market variation
- Career pathways and advancement opportunities
- Institutional outcomes data for alumni, including job placement, industries of employment, earnings, and career trajectories of graduates

This study draws on 37 in-depth qualitative interviews conducted with career services professionals in spring 2025 and undergraduate students in summer and fall 2025. This report features a focused analysis of 14 career services leaders and 23 students representing diverse geographic regions and institutional types (see Appendix for Tables 1 and 2). Career services offices were selected for this study because they are positioned uniquely to connect students directly with LMI and to support its integration across academic programs and campus-wide career development initiatives. Their role provides a critical lens on how LMI is delivered, interpreted, and applied to inform students' education-to-career pathways. Additional methodological details are provided in the Appendix.⁵

Research Questions

This study is guided by three overarching research questions:

1. How do career services professionals share LMI with students, and in what ways is this information communicated?
 2. What are the experiences and perceptions of students who have received LMI from career service professionals and other institutional employees, namely faculty?
 3. Beyond career services and faculty, what other institutional sources provide LMI to students, and how do students access and make sense of these sources?
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Reflection Questions

To support reflection and action across institutional roles, the following questions are offered to guide leaders as they review the report and consider implications for institutional change, practice, and cross-functional collaboration.

- How do we ensure LMI is both accessible and meaningful for each student as they develop their education-to-career pathways?
- How can LMI be integrated effectively across campus and online experiences — degree planning, curriculum, advising, near-peer alumni connections, experiential learning, and self-serve student resources?
- Where does LMI currently live within our institution and where should it live to reach students equitably and at scale?
- What incentives, structures, or partnerships are needed to support faculty, career services, and alumni leaders in shared ownership of career development?
- How transparent and accessible are postgraduation outcomes and career pathways across disciplines, and who is currently left out of this information?

These questions are intended to support institutional and career leaders in translating the findings of this report into strategic, coordinated action that strengthens career exploration, workforce alignment, and postsecondary value.

Findings

The findings are organized into three interconnected sections:

- The first examines how undergraduate students access LMI, highlighting the primary sources they rely on, and how they seek, interpret, and apply career information.
- The second explores students' experiences engaging with LMI through career services and in the classroom, and how these interactions shape their understanding and use of career information.
- The third examines how career services professionals communicate LMI, including the advising approaches they employ and the institutional contexts that shape its delivery.

Key Finding 1: Student interest in LMI is high, but experiences with LMI largely are unstructured.

The first section explores how students access and make sense of LMI throughout their education-to-career journeys. Across interviews, students expressed a strong desire to better understand career pathways, labor market opportunities, salaries, and the skills needed to achieve their goals. Yet many described navigating LMI through a fragmented and largely self-directed process, often drawing on multiple sources in the absence of

consistent guidance. These experiences highlight both students' initiative in seeking career information and the important role that a range of formal and informal sources play in helping them interpret and apply LMI. The findings that follow examine three primary contexts through which students accessed and made sense of LMI: (1) independent research, (2) near-peer networks, and (3) precollege experiences.

Independent Research

Independent online research emerged as the most common way student participants accessed LMI. Nearly every student in the sample described actively seeking career information on their own to inform their education-to-career decisions, often supplementing the guidance they received through their institutions. Student participants relied on a wide range of digital and crowdsourced resources, including search engines, LinkedIn, Reddit, job boards, Glassdoor, artificial intelligence tools such as ChatGPT and Copilot, and other social media platforms. Across these sources, they sought information about occupations and job titles, required skills and credentials, wages and compensation, regional labor market demand, career pathways, and employer expectations.

Most times, online searches served as an entry point for understanding both compensation and the geography of opportunity. Job boards emerged as a central tool in students' online exploration. Participants interested in state or government employment especially were likely to use these tools alongside general search engines. Alina, a returning learner, began exploring the labor market even before re-enrolling in school, using a state job board to assess whether her intended career path could support her in a high cost-of-living area:

"I've gone on a lot of job board sites from my state and looked there for salaries in roles I'm interested in. I looked before I even applied to go back to school again. I live in a high cost-of-living area and money is important to me. I wanted to know if it would be worth it. After doing

my research, I found it'd be a smart financial decision eventually to go back to school for doing something in the government."

Now, while completing her studies, Alina primarily uses Indeed to search for specific openings and her state's job board to explore public sector opportunities. Because she is targeting state or federal roles, she has relied heavily on Washington's databases, though she noted that the information often is limited. As she reflected, "Some of the job descriptions are a bit generic, so it didn't give me a ton of information other than reassurance that maybe it would eventually be worth it financially based on the pay alone."

Other participants relied on general search engines rather than government-specific tools to surface LMI. Eden conducted much of her job and salary exploration online using platforms such as Google and Gemini to identify patterns in job demand across contexts. Beyond evaluating salaries, these searches helped Eden locate geographic hubs where opportunities in her field were more concentrated. As she explained: "I usually start with Google and Gemini, which gives a quick snapshot of salary guidelines and recommendations. Searching online also helps me understand job locations; for example, I've learned that Atlanta is a big healthcare hub, so I know it likely offers good opportunities."

Few student participants described AI tools as particularly valuable for generating rapid, comprehensive overviews, especially for regional salary comparisons and broad career mapping. Leila leveraged AI to access information she finds difficult to obtain through institutional channels. She used an array of AI platforms to map her degree progress, estimate timelines and costs, explore career and graduate school pathways, and assess job demand across regions:

"AI just tells me what the possibilities are. That's why I like it, it's more open-ended. When I have a question, I don't want to wait three business days for someone to get back to me. I want to access things immediately, a bank of information that can give me details on jobs and pay. For example, I might be watching TV, and I see a government job mentioned. I want to know right then — what is the job, what does it entail, how much does it pay, and where can I do it? For me, especially as a parent staying in California,

the main things I care about are where I can work, whether it's remote, the pay, and the education requirements. AI helps me get all of that."

At the same time, some were cautious about treating digitally sourced information as definitive. Participants noted substantial variability across websites and tools, prompting them to seek additional perspectives and cross-validate information. Data without context was viewed as informative but incomplete. Corinne, for instance, found that online salary statistics vary widely, some appearing inflated, others unusually low, and often conflict with information from family members or employers. She emphasized that greater transparency would help her develop more realistic expectations: "I really wish there were more transparency around what salaries actually look like. Any time I look up statistics online, some websites list numbers that seem way higher than I'd expect, and others are much lower. I know it varies by location and job, but I still feel like I'm seeing different versions of the truth. At home, my parents tell me one thing, and at my company I see something different. Then when I Google it, it's different again. I just want a clearer sense of what someone in my position can realistically expect; right now, I don't really have that."

To provide context for labor market data, participants described turning to informal online communities that offered experiential knowledge and firsthand perspectives beyond what was available through traditional sources. Platforms such as Reddit, TikTok, Discord, YouTube, and LinkedIn enabled participants to learn directly from individuals working in the fields they hoped to enter. Through videos, discussion forums, and direct interactions, participants gained insight into job responsibilities, compensation, application timelines, hiring trends, and the day-to-day realities of different careers.

In the absence of structured institutional guidance, Veronica relied on LinkedIn to explore career pathways, identify entry points into the field, and connect with professionals to understand better how her academic interests aligned with potential career trajectories: "I'm still figuring out my interests and where I fit. But once I realized I was interested in mental health and policy, the next step was figuring out how to make that a career. I

started researching and reaching out to people on LinkedIn, cold-emailing folks in the field or at organizations I'm interested in, to learn more about their paths and have meaningful conversations.”

Similarly, Avery regularly consulted TikTok, YouTube, and Instagram, following nurses and nurse anesthetists who share salary transparency posts, application timelines, and day-in-the-life content. Through social media, she compared salary and education costs for nurse practitioners and certified registered nurse anesthetists (CRNAs), reviewing cost-of-attendance charts, required coursework, and program formats. She described her process as:

“I look at salaries on Google, but I also watch videos on social media, TikTok, Instagram, YouTube, about different nurses, where they work, and what it's like for them. They talk about pay differences, overtime, and weekend or night-shift benefits, which all feed into what I know about nursing pay and time on the job. I also watch CRNAs' lives,

where they answer questions about schooling and give immediate feedback.”

Importantly, these behaviors reflect a subset of participants who already are highly motivated and possess strong self-efficacy, and should not be assumed to represent the experiences or capacities of all students navigating career decision-making without institutional support.⁶ Collectively, participants in this study who actively seek out LMI are engaging in complex behaviors; they search across multiple data sources to identify high-quality, accurate information, and they attempt to personalize and contextualize it through crowdsourcing platforms by connecting with peers who share similar experiences and goals. This pattern suggests that students may benefit from additional support in interpreting and contextualizing the information they encounter, helping them connect labor market insights to their educational and career goals.

Near-Peer Networks

A robust body of research has documented peers as key informants in students' understanding of the precollege-to-college landscape, particularly for students navigating college access with limited institutional guidance, where peer networks often mediate information, expectations, and decision-making.⁷ In this study, we found that peers also served as critical sources of career exploration and clarity, helping participants interpret real-world career experiences and gain greater transparency into the labor market.

Participants identified peers and recent alumni as among the most trusted sources of LMI. They relied on these relationships to better understand occupations, required skills and credentials, compensation, career pathways, employer expectations, and workplace conditions. “Hearing from someone who had just been in their shoes a year or two ago” provided practical, timely insights that often felt more relevant than static labor market data alone. Highly motivated participants proactively used platforms such as LinkedIn to cold-

connect with alumni, especially when departmental networks are weak or yield few relevant matches. Nyla, for instance, leveraged LinkedIn's filtering tools to identify alumni in her areas of interest and learn about their career transitions, the skills they emphasized, and the strategies that supported their advancement. She explained:

“Even though we have 10 million alumni, sometimes I end up just cold connecting with people I have no direct connection to. I'll reach out by saying something like, ‘I studied this area at [university] and would love to hear about your work in [field].’ Especially at smaller companies, filtering for alumni sometimes returns only one or zero matches, so I often have to connect proactively.”

In parallel, on-campus student organizations served as powerful hubs for career guidance and LMI. Fraternities and affinity-based networks provided trusted spaces where participants could have candid conversations about salaries, job responsibilities, and long-term career progression with recent alumni. Dante leveraged the alumni network within his fraternity to

supplement his understanding of careers in finance, particularly investment banking and private equity. Through coffee chats, office visits, and informal advice sessions, he gained concrete knowledge about compensation, career progression, and industry expectations. He reflected:

“Once you know people graduate, start working, we can kind of have more open conversations than most people might be willing to have, because not everyone wants to disclose how much they make or what their job entails. But having a close group of even friends that are just a few years older, they can tell you more specifically in detail, like what you’re expected to do, how much you’ll be making, things of that sort, and kind of compare it.”

By connecting with alumni at different stages of their careers, Dante acquired a nuanced understanding of the labor market, illustrating how relational networks and peer mentorship provide insights that extend beyond publicly available statistics or formal resources.

Participants also described drawing on alumni expertise within their fields of interest through structured mentorship programs offered by their institutions. These programs helped connect what students learned in the classroom and through online LMI with the lived experiences of graduates who had entered the workforce. Tiana and Avery, for example, discussed how alumni mentors provided practical guidance that helped translate career aspirations into actionable next steps.

Through a mentorship program in her College of Arts and Sciences, Tiana was paired with an alumni mentor whose career closely aligned with her aspirations. Their mentorship provided individualized guidance on career preparation, including sharing professional resources, reviewing application materials, and discussing strategies for navigating the job market. As Tiana explained, “She’s been super helpful in that regard, giving me resources, evaluating my resume, and we’re meeting later this week to talk about how to market myself.”

Beyond practical career preparation, the mentorship also gave Tiana greater insight into career progression in a field characterized by funding uncertainty and workforce instability. Through conversations with her

mentor, she came to understand that early-career professionals may move across organizations because of “mass layoffs” or revoked positions while continuing to advance professionally. Reflecting on these discussions, Tiana noted, “Despite that, I think she’s shown me that you can still ascend. It’s about how you market yourself.”

Like Tiana, Avery also reflected on the benefits of participating in a mentorship program offered through their university’s career center. Seeking guidance on preparing for CRNA school, Avery turned to a mentor for advice on how to strengthen their application. As they explained, “General advice on what you think I can do right now to prepare for CRNA school. Are there any extracurriculars or opportunities I should look into? What would be most helpful to prepare me or strengthen my application?”

Through these conversations, Avery’s mentor helped translate long-term career aspirations into actionable next steps by discussing strategies, opportunities, and timelines for preparing for graduate school. The mentorship also provided greater insight into career expectations and the educational pathways needed to pursue a career as a CRNA.

Despite the benefits of alumni engagement through structured mentoring, networking fairs, or department panels, just under half of the participants noted they had not yet connected with alumni during college, some viewing this as a missed opportunity or lacking information on alumni outcomes. Gianni highlighted how institutions may underutilize alumni networks:

“We had an alumni event recently, but the focus seemed more on fundraising than on sharing career insights. They didn’t share much about their current careers. When I tabled the event, many alumni were welcoming and willing to talk to me about where they went to school and their backgrounds, but it would have been much more helpful to get deeper insights into their experiences and career paths, even just brief introductions or discussions before the event started.”

Across interviews, participants also identified gaps in access to alumni outcome data. While some recalled seeing employment statistics during the

admissions process or orientation, this information was revisited rarely or integrated into students' academic experiences. Aria commented, "The data is there, but no one really shares it with us. You have to go out and research it yourself." Comparatively, Leanna highlighted differences in career outcome transparency across disciplines. She noted that while the business school widely shares statistics such as a 99 percent job placement rate after graduation, her own department in the sciences does not. As she explained, "Well, I'm sure there is a statistic out there, but we don't know it and they don't share it with us ... they don't really publicize it in my department."

Altogether, participants' experiences underscored the important role that peers and alumni played in helping students navigate education-to-career decisions. Through social media, student organizations, and structured mentorship programs, participants accessed practical insights into career pathways, compensation, professional expectations, and workplace realities that complemented more traditional sources of career information. At the same time, access to these relationships was uneven, with several participants noting limited opportunities to connect with alumni or obtain information about postgraduation outcomes through their academic departments.

Precollege Experiences

Research suggests that early exposure to college and career development supports more informed education-to-career decision-making before students enter college.⁸ Consistent with this literature, a subset of participants described how early exposure to LMI in middle and high school helped them feel more informed and confident as they considered their educational and career options. Across these experiences, participants reported receiving information about occupations, required skills and credentials, wages, and career pathways. Although participants attended different types of high schools, including those with well-developed career-focused programs, they consistently described early access to LMI as helping them better understand their options, evaluate potential pathways, and make more informed decisions about their futures.

For example, Morgan attended a career and technical education (CTE) high school that offered a dual enrollment program, allowing students to take college-level courses while completing high school requirements. These courses, combined with practical clinical experiences embedded in her schedule, gave her early exposure to different specialties, certifications, and education requirements, helping her identify areas she enjoyed and wanted to pursue. As a result, she felt more prepared for college, could make informed choices about her major, and even shortened her time to degree completion "by targeting the fastest routes to become qualified and employed."

Aria began exploring careers in middle school through AVID, a program that introduced students to career readiness through structured projects. These projects required students to investigate LMI such as job outlooks, salaries, and career pathways. Through activities such as career pathway worksheets and "dream books," Aria mapped potential trajectories from her current self to future careers, researching steps including high school programs, college options, and occupational requirements. As she reflected:

"While I was in the program, we would essentially do career readiness projects. One project I distinctly remember involved making a pathway from my present self to whatever career we wanted. We researched programs to take in high school, colleges to attend, and potential future jobs. It helped me really buckle down on thinking about my career. When I got to high school, I knew how to research more about what mechanical engineers do through the U.S. Bureau of Labor Statistics (BLS). I realized the job really aligned with what I wanted in terms of pay and the type of work I'd be doing."

Like Aria and Morgan, Gianni attended a high school structured around chosen majors. Gianni declared a prelaw major and learned from teachers who were retired lawyers, gaining firsthand insights into career paths, specialties, and salary ranges. Organized career days and law firm shadowing experiences provided

tangible, contextualized knowledge of the profession.

Reflecting on these experiences, Gianni explained:

“We talked about a lot of career pathways. My teachers were retired lawyers who chose to become teachers at my high school. For the most part, we learned about salaries around lawyers, but they delved into specifics since each came from a different specialty. Like, criminal lawyers made a lot more than environmental lawyers. We also had a career day where we visited a law firm to learn more about careers and education requirements.”

During high school, Kai’s participation in the My Brother’s Keeper program illustrated how LMI can be introduced through community-based organizations. Designed to provide young men in the New York City area with networking opportunities, mentorship, and site visits with STEM professionals, the program exposed Kai to career pathways and workplace expectations early in

his education. As Kai recalled, “We attended networking events where STEM professionals came in to discuss their work, research, and day-to-day experiences. It not only helped me learn, but also gave me contacts in my field and taught me how to present and promote myself.” He also noted asking professionals about “skills and education” and “what kind of mindset I need,” using their experiences to inform his own goals.

As demonstrated, participants accessed LMI through both formal, curriculum-integrated instruction and informal, experiential learning opportunities before enrolling in college. Structured programming provided foundational knowledge about careers, salaries, and education and credential requirements, while mentorship and community-based experiences offered firsthand perspectives on professional norms, skill expectations, and career pathways.

Summary

Student participants demonstrated strong agency, drawing on a diverse network of resources – including online research, peers, recent alumni, and, for some, precollege experiences – to identify, interpret, and apply career information. Rather than relying on a single source, students combined labor market data with firsthand perspectives to better understand career pathways, workplace expectations, and educational requirements. Participants’ access to these resources and relationships varied across the sample, suggesting opportunities for institutions to strengthen students’ access to and understanding of LMI with existing resources.

Key Finding 2: Career centers and coursework are not yet primary sources of labor market insights for students.

In this section, we highlight how student participants encountered LMI through career services, faculty, and classroom instruction. During interviews, participants described relatively few meaningful opportunities to engage with career information in these settings, with many reporting that exposure was limited or inconsistent

throughout their college experiences. At the same time, participants consistently expressed a desire for LMI to be integrated more intentionally into both advising and academic coursework. The findings that follow first examine students' experiences with career services before turning to the role of faculty and classroom instruction.⁹

Career Services

Three-quarters of participants reported limited engagement with career services as a source of LMI, despite expressing a wide range of career-related questions and information needs. Although most participants generally were aware of their campus career centers, their interactions typically were limited to transactional services – such as resume reviews, mock interviews, career fairs, and job-search assistance – rather than ongoing career exploration or discussions about LMI. The narratives that follow illustrate the varying ways participants engaged with career services, from little or no interaction to sustained use of career center resources.

For many participants, limited engagement reflected uncertainty about what career services offered beyond traditional job-search support. Some perceived career center guidance largely as “generic” and not sufficiently tailored to their academic interests, career aspirations, or personal circumstances. For others, awareness itself was a barrier. As Imani, a third-year student, explained, “Having a career coach, somebody to guide me and tell me what I need, would be helpful. But I really have no clue if they have career coaches or advisors on my campus.”

A smaller group of participants described more regular engagement with career services, although their interactions remained focused primarily on practical tools rather than ongoing career planning or LMI. Dante,

a graduating senior, illustrated this pattern. He regularly attended career fairs, used resume review services, and participated in career talks with finance firms, while also relying on online resume templates and AI-supported feedback tools. As he explained:

“I think we have a good career center, and it’s accessible to all students. I used it a lot sophomore year, going to career fairs, getting my resumes reviewed, and joining career talks to meet with finance firms, which I found really helpful. With the resumes, now the process feels more digital, with the career center templates available online and they have AI software and tools that help analyze resumes.”

Although Dante engaged with career services more consistently than most participants, his experience remained centered on immediate career preparation rather than broader discussions about labor market trends, career pathways, or individualized career planning.

In contrast to most participants, only three students described career services as a sustained source of LMI and individualized career guidance. Unlike participants whose interactions centered on resume reviews, career fairs, or online resources, these participants engaged with career services through insider roles, such as career center ambassadors or federal work-study positions, which provided ongoing exposure to employer expectations, salary information, career pathways, and workforce trends. Their experiences

shed light on how sustained proximity to career services shaped both access to LMI and perceptions of institutional support.

Early in her collegiate journey, Paula encountered limitations in the generalized guidance offered through her campus's centralized undergraduate career services office. She recalled, "I asked what it would look like to pursue a JD (Juris Doctor) or other law tracks, different paths and pay, but was told to talk to the law school. The advice felt very general, almost like a memorized brochure. It didn't feel like I could ask questions or get real support."

At a time when she felt undersupported by career services, Paula's experience with her TRIO program demonstrated the value of personalized, labor market-informed advising. Her TRIO advisor provided individualized guidance aligned with her interests in law and criminal justice. As Paula explained, "She really went the distance and got me a lot of the answers." She described learning about specific career paths — "kids, adults, prosecutor, judge," — as well as current job openings, salary differences, and the geographic availability of opportunities.

By her senior year, Paula's federal work-study role in her law school's career center provided sustained, insider

exposure to legal career pathways. She explained, "I chose to work in the career department because I was like, 'OK, you guys are the ones.' I'm watching alumni come in every day trying to get a job, and students are looking." Through this role, she developed a more nuanced understanding of postgraduation outcomes, including JD-advantage positions in which a law degree was valuable without requiring traditional attorney licensure.

Similarly, Leanna's experience as a career center ambassador illustrated how sustained proximity to career services expanded access to career information and guidance. Through her role, she supported career fairs and resume workshops while receiving individualized guidance on translating her academic training into career pathways. As she explained, "They've given me a lot of advice about the skills I already have and how to make them transferable." She also noted that staff helped her revise her resume for different positions, discuss salary expectations and job demand, and better understand how starting salaries could grow over time.

Across participants' narratives, these patterns suggest that obtaining LMI through career services is shaped by awareness, perceptions of relevance, proximity, and the timing of engagement. As a result, many students may miss opportunities to leverage career services as a source of ongoing career guidance and labor market insight.

Faculty

Faculty have the potential to play an important role in connecting students' academic experiences with future career opportunities by integrating LMI into classroom instruction. During interviews, however, participants described relatively few opportunities to engage with career information through their coursework. When LMI was incorporated into classroom discussions, it focused most often on skills, competencies, experiential learning opportunities, and educational requirements associated with a particular field. Few participants described classroom discussions that extended to broader labor market topics, such as wages, employer demand, career pathways, or workforce trends. Although participants

valued faculty members' disciplinary expertise and professional experience, many also perceived a disconnect between faculty guidance and the realities of today's labor market.

Within the sample, only two participants reported experiencing classroom activities that explicitly incorporated labor market research or structured career pathway exploration. Leanna highlighted the value of a junior-year biology seminar that integrated resume and curriculum vitae workshops, career mapping, salary research, and engagement with guest speakers. She reflected,

“Last spring, I took a seminar where we did projects on what careers we wanted and resume writing. Our instructor made us intensely research educational requirements, salary, who do you need to know, and what companies you could possibly work for. We also had a few speakers. Because of how he formatted the class, we got so much knowledge and were able to kind of look within and say, ‘OK, is this really what I want? Is this where I want to go?’”

While she found the course highly beneficial, she emphasized that it would have been more impactful if introduced earlier, noting that beginning this work in the first or second year “would have probably been more helpful” for making informed academic and career decisions. Her reflection highlighted the potential value of introducing career exploration and LMI earlier in students’ academic experiences.

Similarly, Veronica described a first-year seminar that encouraged initial pathway exploration but lacked continuity. While it “gave a nudge,” she noted that embedding this type of guidance throughout her degree plan, rather than limiting it to a single introductory course, “would have been really beneficial to her journey.”

For most participants, faculty discussions emphasized skills development, internships, undergraduate research, and other forms of professional preparation. Participants valued these conversations, describing faculty as important sources of disciplinary knowledge who introduced them to professional norms, credentials, work-life balance, and broad career sectors. However, these discussions rarely extended to broader LMI such as employment demand, compensation, long-term career opportunities, or workforce trends. For instance, Corinne, a civil engineering major, explained that her professors regularly rotated

through different sectors each semester, helping students understand the expectations and characteristics of each career path. At the same time, these conversations rarely extended to broader LMI that would help students evaluate career pathways, employment demand, compensation, or long-term opportunities.

In addition to describing limited exposure to LMI, others also perceived a disconnect between faculty members’ career guidance and the realities of today’s labor market. Several attributed this to generational differences, noting that the labor market their professors entered differed substantially from the today that students navigate. As a result, even well-intentioned advice sometimes was perceived as outdated or incomplete. Alina, a psychology major, reflected that while her professors were open about sharing their own career journeys, “some of the guidance no longer aligned with current career pathways or workforce opportunities.” She recalled hearing about pathways that “don’t exist anymore,” making it difficult to apply that advice to today’s labor market. Instead, she expressed interest in hearing more from recent graduates whose experiences reflected the current employment landscape and felt more relevant to her own career planning.

The disconnect not only was experienced as incomplete guidance, but also at times, discouraging career advice. Paula, for example, recounted professors warning her about limited job prospects and earning potential in sociology, advising her to retain her criminal justice major because “there’s no real job out there” for sociologists. Collectively, these narratives illustrated that students valued faculty as trusted mentors and disciplinary experts, while also expressing interest in career conversations that more consistently reflected current labor market realities.

Summary

Student participants described relatively few opportunities to engage with labor market-informed career guidance through career services, faculty, or classroom instruction. Although these settings are primed to contribute to students’ career development in meaningful ways, participants expressed interest in stronger connections between academic preparation, career guidance, and today’s landscape.

Key Finding 3: Scaling personalized labor market insights is a challenge.

To complement the narratives of the undergraduate students in this study, we also interviewed career services leaders to explore how they used LMI in their work with students. Our third finding revealed an important contrast. Whereas students rarely described engaging with institutional sources of LMI, career services leaders described it as central to their practice. During interviews, participants explained that LMI was embedded in multiple settings – both within and beyond the career center – to support student learning, career exploration, and career development. They described LMI as a critical resource for helping students make informed career decisions, explore majors and career pathways, identify internship opportunities, connect with alumni outcomes, and develop realistic expectations about salaries and employment prospects.

In practice, participants highlighted the use of a combination of proprietary and public data sources to access and stay current on LMI, most commonly using tools such as Lightcast, O*NET, and data from the BLS. They also supplemented these resources through field-specific newsletters, webinars, conferences, and professional development opportunities offered by organizations such as the National Association of Colleges and Employers (NACE), as well as through state and regional convenings where peer institutions, workforce agencies, and other stakeholders share information on employer needs, workforce conditions, and emerging trends. Across institutions, LMI most commonly was integrated into three contexts: (1) individual advising sessions, (2) group workshops, and (3) academic courses. Notably, the use of LMI was not uniform across participants who served as career services practitioners in this study.

Advising sessions

LMI was embedded mostly within advising interactions. Participants described using LMI during advising sessions to discuss career options and job titles, required skills and competencies, education and credential requirements, wages, regional labor market demand, industry trends, experiential pathways, and graduate employment outcomes. Participants consistently emphasized that LMI was most effective when tailored to students' individual interests, goals, and circumstances, noting that students were more likely to engage with and act on career information when it was delivered through personalized guidance rather than as standalone data. Rather than simply providing information, participants described their role as helping students interpret and apply LMI to their own educational and career goals. Monica, executive director and vice president of student and career advancement, noted that "advising conversations need to incorporate this data actively, sitting down with students to discuss what it means and how it applies

to their goals." Elise echoed this point, explaining that wage data in particular "is often misunderstood and requires careful framing to manage expectations."

To facilitate these conversations, some advisors discussed setting aside time before one-to-one meetings to review labor market data and prepare personalized information for students. According to Elise, this preparation allows advisors to connect labor market trends to employer-valued skills and career opportunities: "It's real, it's relevant, it's real time. If it's not just my words, but I'm pointing to actual labor data, then ... they listen in a different way." However, Elise and other practitioners in the sample noted that this level of preparation can be difficult to sustain given large caseloads and limited advising capacity, which may constrain opportunities for personalized engagement.

Participants also reported using LMI more frequently with undecided students than with those who

already have selected a major. Hannah, a director, described how her team integrates LMI into career assessments for undecided students to help them understand job responsibilities, required skills, education pathways, and employment outlooks in fields such as nursing, information technology, and accounting. As Hannah explained:

“We use LMI when meeting with students who are undecided. After they take a few career assessments and begin narrowing down their options, we educate them on what’s out there for opportunities, job responsibilities, skills needed, education requirements, and employment prospects. This helps students make more informed decisions about potential careers.”

Hannah also described an intentional strategy of introducing LMI before students enrolled and reinforcing its use throughout their time on campus. At her community college, LMI was incorporated into program webpages, and undecided students were connected to career services during registration events. However, rather than positioning this exposure as sufficient on its own, the approach is designed as an entry point, giving students early awareness of career outcomes and program alignment before enrollment, with opportunities to revisit and more deeply engage with LMI through advising and career services once on campus. As Hannah explained, “Even before students enroll, we want them to make informed decisions about why they’re selecting a program.”

Similarly, Lina, an executive director, described how career coaches at her institution used LMI flexibly and selectively, prioritizing accessibility and relevance over exhaustive analysis during advising sessions. To prepare for student meetings, Lina and the career coaches drew on resources such as O*NET, BLS data, and AI tools to provide students across a range of majors with information about occupations, career pathways, and employment trends. They also frequently used First Destination Survey (FDS) data to show where graduates from specific majors had worked over the previous five years. As Lina explained, FDS data was used “less to talk about the salary and more about the companies that our students have gone to,” helping students visualize realistic career pathways and potential employment destinations.

Rather than conducting in-depth labor market analyses during advising sessions, career coaches focused on helping students apply the information in practical ways, particularly by “helping students identify paid internship opportunities and learn how to search for them.”

While participants across the sample consistently emphasized the importance of tailoring LMI to students’ interests, skills, and career goals, several also noted that effective advising requires a deeper understanding of students’ lived experiences and personal circumstances. For some, personalizing LMI meant not only helping students identify careers aligned with their strengths and aspirations, but also considering how factors such as culture, family responsibilities, geographic preferences, and financial realities shape career decision-making. Discussing the importance of applying a culturally responsive lens when using LMI in advising sessions, Page, an executive director, emphasized that labor demand alone cannot determine viable career pathways if students are unable to relocate due to family, cultural, or other personal obligations. As she explained:

“Some of our populations are culturally diverse ... It’s really important to stay close to home. We’ve had students go and do internships, and then something happens at home, and folks are expected to come home and help support the issue that’s happening at home.”

In addition to considering students’ family and cultural contexts, other participants emphasized the importance of making LMI accessible to students from diverse linguistic backgrounds. Derek, an assistant dean of advising and career services, highlighted the value of tools such as O*NET offered Spanish-language resources, noting that they were particularly important for serving the institution’s large undocumented student population. Derek reflected, “We like the O*NET a lot, because there’s English and the Spanish versions, and that really helps for our student populations. Having it in more languages would be even better for all students.” For Derek, the effective use of LMI required ensuring that students could access and engage with information in ways that reflected their language needs and familiarity with career exploration processes.

These findings suggested that the value of LMI lay not only in the information itself, but also in how it was delivered and interpreted. When career information was accessible, culturally responsive, and

paired with personalized guidance, it became a powerful tool for helping students navigate career pathways that aligned with their goals, identities, and lived experiences.

Workshops

The second way participants discussed bringing LMI to life was through workshops hosted by their career centers, where practitioners helped students connect labor market trends to career exploration and planning. At workshops, LMI is used to explore roles, skills, wages, regional trends, and career pathways, while offering hands-on opportunities for students to build confidence in interpreting information and making informed career decisions. For example, Eric, a director, integrated LMI into his work through semesterly workshops, guiding students in real-time exploration using his institution's LMI tool. As he explained, "I usually, about once a semester, put on a workshop on how to use the labor market insight tool on our website, and then we do some practicing and role playing with that."

According to Eric, these sessions have helped students not only locate LMI resources on the career center website, but also practice applying the information to their own career planning. Workshops have enabled practitioners to reach larger groups of students at once, expanding awareness of available resources and increasing students' exposure to LMI.

Yet, while the promise of such programming was clear, many participants described practical barriers to implementation. Reina, a director, described an initiative her team had begun planning — a workshop designed to help students align career pathways with their personal and family expectations, a topic she believed would resonate strongly with students. She reflected:

"We started planning a workshop ... How to find a career path where you can make a good living, satisfy your parents' desires for you, and still do something interesting. I don't know why we didn't move forward with that, because I do think students have the question: OK, what can I do that's going to make me enough money but still be interesting? But I don't think we ever pulled that off. Maybe we thought students wouldn't come ... I don't know."

Reina's hesitation highlighted a broader pattern across narratives. Although participants recognized the value of LMI-focused workshops, institutional capacity and perceived student interest often determined whether such programs were implemented.

Lucas, an executive director, described a similar experience, noting a marked decline in workshop attendance in recent years, "Sometimes, we'll do workshops and the students may not have that interest, or maybe they're gaining their own labor market insights from TikTok or YouTube or wherever they're getting their information." As general workshops have become increasingly "hit or miss in terms of attendance," Lucas' team has shifted toward classroom presentations and one-on-one advising to introduce LMI, including graduate outcomes data. He noted that the decline reflected institutional policy changes that altered students' incentives to engage with career services: "Our workshops used to count toward priority housing points, which encouraged participation. With that program discontinued, it's harder to predict student engagement."

Despite these challenges, Lucas emphasized that students who attended the workshops valued the opportunity to hear directly from employers and access region-specific labor market insights. "They like hearing from employers directly ... those that will hire them," he noted, explaining that students appreciated labor market data tied both to the regions where many hoped to work and to opportunities across the state. Altogether, participants described workshops as an effective way to help students interpret LMI and apply it to career decision-making. However, participation often was perceived as limited due to staffing constraints, student engagement, and competing demands, leading some offices to rely more heavily on advising or classroom-based approaches.

Academic Courses

Embedding LMI into academic courses and classroom experiences offered another key avenue for delivering career information to students. In partnership with faculty, participants described integrating labor market insights into courses through guest presentations, discipline-specific activities, and ready-to-use instructional materials. Beyond direct engagement with students, many also described efforts to build faculty and staff capacity through professional development, training, and resource sharing, enabling LMI to be incorporated more consistently into teaching, advising, and student support efforts across their institutions.

Several participants described how integrating LMI into presentations and advising sessions leads to noticeably higher levels of student engagement. For example, Elise explained that her team regularly delivers in-class presentations for academic departments across campus, using these sessions to introduce students to labor market trends, career pathways, and workforce opportunities related to their fields of study. She observed that students often become noticeably more engaged when LMI is incorporated into these presentations, suddenly “make eye contact, take notes, [and] ask questions,” suggesting that the information feels more relevant and credible.

Like Elise, Eric regularly delivered classroom presentations for students across a range of academic departments at his institution. However, he emphasized that faculty also can play an important role in exposing students to LMI. Eric’s team provides faculty with ready-to-use lesson plans and assignments that incorporate LMI and direct students to engage with the career center’s online resources and interactive tools. By embedding these activities into existing coursework, faculty have the tools to introduce students to LMI while also helping them practice navigating and applying the information to their own career planning. As Eric reflected, “Having lesson plans that are easily plug-and-play and available for faculty and staff has been great. I have also seen a huge push for using the labor market insight tool, just because it’s already part of an assignment.”

Some participants reported that their institutions had developed formal strategies for embedding LMI

into coursework and the broader curriculum. Monica’s team, for example, developed partnerships between career services, faculty, and employers to integrate LMI into classroom settings. She described a pilot initiative in which LMI was incorporated into classroom presentations for three certificate programs at her university. The programs were selected because they offered clear, workforce-aligned pathways, allowing students to see tangible connections between their coursework and potential careers.

As part of the pilot, selected courses within each certificate program were redesigned to include dedicated sections focused on career exploration, including job titles, required skills, and salary ranges. Each certificate program also underwent a triennial review, incorporating employer feedback and salary data to ensure curricula remained aligned with labor market demand. Students responded positively to the pilot, noting the value of understanding job titles, skills, and salary ranges. As Monica explained: “The feedback we got from the students was super helpful. They really appreciated understanding a little bit more about the job titles, about the skills and about the salary ranges that are out there ... If we’re strategic in how we position and inform students on labor market information, it should help students persist. They can see the light at the end of the tunnel.”

Monica also described working with faculty each semester to embed career center tools, such as virtual interview simulations and resume review platforms, directly into course assignments. This approach has enabled students to receive feedback on resumes or mock interviews even when career services staff are not present. Monica emphasized that this level of integration is essential because it embeds career awareness into the learning process rather than treating LMI as static information: “You can’t just slap labor market stats or apps on a website and hope it works. You have to integrate it into the student journey, and an easy way to do that is through their course assignments.”

For several participants, the effectiveness of classroom-based LMI also hinged on tailoring content to students’

local and institutional contexts. A defining feature of community college director Derek's work, for example, is how his institution's geographic and economic location in the central mountains of Colorado shapes student career planning. With few nearby colleges and a limited local job market, Derek explained that many students developed what he called a "tunnel vision" toward career opportunities, focusing primarily on jobs available in their immediate communities. This local context shaped how he designed classroom workshops. Rather than asking students immediately to consider distant opportunities, he discussed beginning each session by connecting LMI to their hometowns before gradually expanding the discussion to include remote internships and high-demand positions in metropolitan areas. As Derek explained, these demonstrations often were "customized to students' hometowns," helping students connect LMI to actionable career planning while broadening their awareness of opportunities beyond their local communities. Derek also described plans to develop formal training for career advisors, equipping them with the same tools and strategies to extend this approach beyond the classroom.

Narratives also suggested that successfully embedding LMI into coursework and classroom activities depended on intentional collaboration between career services and academic affairs. For instance, Lina highlighted how her team partners with faculty across the institution to bring labor market insights into students' learning experiences. Specifically, her team works with faculty "champions" – faculty members who serve as partners and advocates for career development within their departments – to incorporate career-focused activities into course assignments. At her institution, faculty champions have

integrated mock interviews with employers into their courses, providing students with direct exposure to industry perspectives and expectations. Lina noted that these efforts have been most successful among highly engaged faculty who are committed to helping students connect their academic experiences to career outcomes.

While several participants described similar efforts to engage faculty and staff in the use of LMI, they acknowledged that building and sustaining these partnerships can be challenging in some institutional contexts. Lina and others acknowledged variability in faculty buy-in. Lina explained, "Some faculty are really responsive to this work. Others not as much; when folks don't see the connection, it can be frustrating." Recognizing that some faculty may be hesitant to incorporate career-related content into their courses, Lina stressed that "these efforts are intended to complement, not replace, disciplinary learning." Lina argued that career services had a responsibility to help students understand how their academic experiences translated into employment opportunities and future earnings. As she noted, "Students didn't come here just to be better thinkers. They came here because they wanted to know what programs we had that would lead to a job that they wanted."

In aggregate, participants reported the value and potential of classroom integration to broaden students' access to LMI while reinforcing connections between academic learning and career outcomes. At the same time, participants emphasized that sustaining these efforts depended on strong partnerships, faculty engagement, and institutional commitment. As Lina reflected, "How do you overcome that?"

Tending to Immediate Student Needs

Despite broad support for the value of LMI, its use was not universal across the sample. Three participants reported using LMI less frequently, often prioritizing students' immediate needs over longer-term career planning. For these practitioners, high-demand services – such as resume reviews, mock interviews, and internship or job placement support – typically

take precedence, leaving limited time to incorporate broader LMI. This approach reflected a different sequencing of career guidance: advisors first focused on helping students clarify their interests, build skills, and navigate immediate decisions, introducing LMI as a complementary resource once students' career goals became more defined.

Tara, an associate director, described advising appointments in her office as largely focused on “tactical outcomes.”

Tara observed that students frequently arrive seeking immediate results, such as securing internships, submitting job applications, or preparing resumes, rather than exploring long-term career fit or labor market trends. While she recognizes the growing importance of LMI, her office has not yet incorporated it systematically. She explained, “We don’t use LMI. But we need to figure that out, because it’s becoming more important. We want to figure out a way to do it, but our most common appointment types are job and internship. Students tend to be very tactical ... ‘I need an internship, I need a job.’ Not realizing, did you do the work to figure out what you want to do? Because you say, ‘Well, what kind of internship would you like?’ And they say, ‘I’ll take anything.’”

Tara also highlighted training considerations. While career advisors likely could integrate LMI with minimal training, graduate student advisors, who experience high turnover, would require annual training, further limiting capacity: “[We] would have to train all of our grad students ... we need to do that every year, because we get new grad students.”

Megan, a director, echoed these observations, noting that her students typically are more focused on articulating and positioning their experiences – through pitching, interviewing, and career pivots – than on engaging with regional or national LMI. Rather than embedding LMI routinely, she integrates it only when it aligns with student questions or emerges through faculty-led efforts. As she explained, she “doesn’t necessarily have enough bandwidth to fully communicate LMI in sessions,” and even when students are exposed to LMI through clubs or

faculty advisors, “it doesn’t really seem to change student behaviors or interests.”

Associate director Allison also acknowledged that LMI is “theoretically important, as career centers should guide students toward fields with genuine demand.” However, she questioned the relevance of traditional LMI in today’s volatile, AI-driven labor market, where “roles are evolving faster than national or regional datasets can capture.” As a result, her team relies less on formal LMI analyses and more on real-time signals about emerging trends and in-demand skills. Rather than systematically embedding LMI into every advising session, they guide students to accessible tools such as O*NET and complement this with discussions about how industries are shifting.

Allison further linked the limited use of LMI to the nature of student inquiries. Most students approach advising sessions seeking to explore fields of interest and establish professional connections, rather than to interpret labor market statistics. As she observed, “I think it’s just students stating what field they want to be in, and then us really connecting them with alumni and other experts in the field to learn more.” From this perspective, her approach represents a strategic reconciliation between the theoretical importance of LMI and the practical realities of student-centered advising; it prioritizes actionable guidance and professional mentorship in a labor market in which conventional data may not capture emerging trends. Ultimately, the experiences of this subset of practitioners suggest that some career leaders prioritize students’ immediate needs, using LMI selectively as a complementary tool to support career exploration and decision-making.

Summary

In contrast to students’ accounts of fragmented and largely self-directed access to career information, practitioners described a range of intentional strategies for embedding LMI into advising, workshops, and classroom experiences to meet students where they were. This contrast suggested an important opportunity for institutions to strengthen the visibility, consistency, and reach of LMI, ensuring that students more consistently experienced the career guidance and support practitioners intended to provide.

Looking Ahead

Findings from this study deepen our understanding of how LMI is used across college campuses, highlighting both the opportunities and challenges of delivering LMI through advising, coursework, workshops, and students' own independent exploration. Together, the findings point to three conditions necessary to unlock the full value of LMI:

- Access to high-quality data
- Personalized and contextualized insights
- Timely integration across the education-to-career journey

When these conditions are in place, LMI can support informed decision-making, strengthen institutional resource allocation, and make career guidance more relevant, actionable, and impactful for students. During our work, we asked participants, career leaders, and technical advisory groups to identify both effective practices and opportunities to strengthen how LMI is used to support student success. The recommendations that follow offer actionable strategies for career services and institutions to enhance LMI integration across the student experiences.

Help Students Become Effective Consumers of Career Information

- **Students increasingly rely on social media, online platforms, AI tools, peers, and informal networks to gather career and labor market information.**

Rather than attempting to replace these sources, institutions can equip students to critically evaluate, interpret, and apply career information in ways that support informed education-to-career decision-making. Career services can play an important role by helping students contextualize the information they discover independently, translating labor market data into personalized guidance while helping students distinguish credible sources from misinformation.

- **Institutions can strengthen this work by elevating the visibility of career services as a trusted source of vetted labor market information and personalized guidance.** Because many students continue to engage with career services primarily for transactional

needs, institutions have an opportunity to position these offices as ongoing partners in career planning throughout students' educational journeys.

Increasing the visibility of discipline-specific career resources through student portals, advising systems, departmental websites, and learning management systems may help ensure students encounter reliable career information when and where they need it most.

- **Career services leaders also can model evidence-informed practice by embedding labor market data into routine staff development and organizational workflows.** For example, regularly reviewing regional employment trends, workforce demand, and industry changes during staff meetings can help practitioners maintain current knowledge and consistently integrate labor market insights into advising conversations and programming.

Intentionally Engage Students in Structured LMI Experiences

- **Students described relatively few structured opportunities to engage with LMI through coursework, advising, or career programming.** This suggests an opportunity to embed LMI more intentionally throughout the educational experience rather than relying on students to seek information independently.
- **Institutions can integrate career development and labor market information across the curriculum by embedding career exploration into key educational milestones, including orientation, first-year seminars, major selection, internships, capstone experiences, and graduation preparation.** Early experiences may introduce career pathways, alumni outcomes, and salary trends, while later coursework can deepen students' understanding of workforce demand, required skills, credentials, and regional employment opportunities.
- **Creating incentives for participation through credit-bearing career courses, embedded workshops, career exploration assignments, and experiential learning opportunities may increase student engagement with career planning while normalizing career conversations as an integral component of academic success rather than an optional service.** These approaches can make engagement part of students' academic experience rather than something they must opt into separately.
- **Faculty, career services, academic advisors, and student support professionals should collaborate to create coordinated, continuous career guidance across the student journey so that students encounter LMI repeatedly and at developmentally appropriate moments.** This may include shared programming, coordinated referrals between departments, or common career-learning goals across offices.

Build a “Career Everywhere” Institutional Culture

- **Creating a campus culture in which career development is viewed as a shared institutional responsibility requires coordinated collaboration across academic and student affairs.** Faculty are positioned uniquely to connect classroom learning with workforce opportunities when equipped with timely LMI and practical career development resources.
- **Institutions can strengthen this capacity by investing in professional development for both faculty and career services staff focused on labor market trends, workforce changes, and culturally responsive advising practices.** Career services leaders described promising strategies already underway, including faculty ambassador initiatives, career champion programs, classroom presentations, and faculty development workshops that extend career conversations beyond the career center.
- **Career services can further support this work by providing plug-and-play lesson plans, classroom activities, labor market dashboards, discussion guides, and discipline-specific resources that faculty easily can integrate into existing courses.** Integrating advising systems and career platforms also can facilitate information sharing across academic advising and career services, allowing faculty, advisors, and career professionals to develop a more complete understanding of students' goals while reducing the need for students to explain their aspirations across offices repeatedly.

Strengthen Career Information Across Students' Networks of Support

- **Students consistently described career decision-making as a social process, relying on family members, peers, recent graduates, faculty, mentors, and community members to interpret LMI and make sense of career opportunities.** Institutions can strengthen these networks by intentionally expanding access to trusted relationships that help students translate LMI into meaningful educational and career decisions.
- **Building career awareness before college represents one opportunity to strengthen these networks.** Institutions can partner with local high schools and community-based organizations to provide students, counselors, teachers, and mentors with resources that build LMI literacy before students arrive on campus. Campus visits, career exploration workshops, and collaborative programming can help students begin connecting their interests with educational pathways and workforce opportunities earlier.
- **Once students enroll, institutions can leverage alumni and peer networks to complement faculty and career services.** Students frequently described recent graduates and near peers as trusted sources who translated static LMI into realistic advice about career pathways, hiring expectations, geographic mobility, and workplace experiences. Alumni mentoring, peer ambassador programs, employer panels, job shadowing, networking events, and “day-in-the-life” conversations can make LMI more tangible while helping students build confidence and career capital throughout their education-to-career journey.

Directions for Future Research

Beyond practical implications, this study also identifies several important directions for future research. As postsecondary institutions increasingly prioritize the alignment of educational experiences with workforce outcomes, additional research is needed to understand better the conditions under which LMI most effectively supports students' education-to-career decision-making. Future research should examine how students interpret, evaluate, and apply different forms of LMI across disciplinary and institutional contexts; investigate the timing, intensity, and modes of LMI exposure that are most consequential for student

development; and evaluate the effectiveness of institutional strategies for integrating LMI throughout the student journey. Longitudinal and mixed-methods studies are particularly well positioned to examine whether sustained engagement with LMI influences educational choices, career self-efficacy, workforce readiness, and longer-term employment outcomes. Advancing this line of inquiry will strengthen the empirical foundation for developing evidence-based approaches to embedding LMI within postsecondary education and improving students' education-to-career transitions.

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Methodological Appendix

The results of this study were derived from 37 in-depth qualitative interviews with career services practitioners and undergraduate students, conducted in two phases. The first phase consisted of interviews with 14 career services practitioners representing a range of geographic contexts and institutional types (see Table 1). Practitioners held senior leadership positions within their campus career centers, serving in executive, director, or assistant director roles. Recruitment efforts targeted practitioners through professional membership organizations, which provided access to a diverse pool of participants and established a strong foundation for recruitment. Semi-structured interviews with career services staff explored their coaching strategies in relation to the principles of quality coaching, their use of LMI in student interactions, and the challenges they face in engaging students effectively. Practitioner interviews were conducted virtually via Zoom from June through August 2025 and lasted approximately 60–90 minutes each.

To complement the practitioner insights, the second phase involved semi-structured interviews with 23 full-

time undergraduate students to capture their experiences with career services, including their understanding and perceptions of how LMI is used during advising sessions (see Table 2). Students also were asked to share insights on the other sources of coaching and labor market information they receive through both institutional resources (e.g., career services, faculty, staff, student organizations) and external networks (e.g., family, community). Student interviews were conducted virtually from September through November 2025 and lasted approximately 45–60 minutes each.

Interview protocols were refined through multiple iterations, including user testing, which ensured that the protocol was robust, aligned with the study's objectives, and kept student voices central to instrument development (Creswell, 2017; Lincoln & Guba, 1985; Mertens, 2019). All participants were provided with electronic consent forms prior to participation and asked to review and confirm consent at the time of the interview. Each participant received a \$50 e-gift card incentive following the completion of their session.

Data Analysis

Data were thematically analyzed in two phases. After each interview, written memos were used to capture emerging patterns and trends related to the research questions. These memos informed the development of the coding schema and initiated the analysis process. In the first phase, all memos and interview transcripts were reviewed multiple times to identify initial patterns in the data. In

the second phase, these patterns were reorganized and refined into overarching themes that represented the key findings of the study. Emerging findings were shared across multiple settings for member-checking with participants and peer-debriefing with practitioners, Strada research advisory group members, and Strada's Quality Coaching team (Mertens, 2019; Saldaña, 2021).

Limitations

There are a few limitations to this study that should be considered when interpreting the findings. This study did not include part-time students, who often navigate distinct academic, financial, and employment demands; therefore, the findings may not fully reflect the experiences of students balancing school with work or caregiving. Representation from students pursuing associate degrees also was limited, constraining insight into how pathways and support structures may differ in two-year programs. Additionally, the students and staff who participated were not from the same institutions. While this was intentional, designed to cast a wider net

of perspectives and capture cross-institutional patterns, it also limits the ability to draw direct comparisons between student and staff experiences within a single campus context. Finally, the analysis did not examine variation across social identities such as race, gender, or first-generation status. Because these identities often shape students’ access to resources and perceptions of career development, the findings may overlook important group-specific patterns. Future research may explore these identity-based factors if meaningful correlations emerge, allowing for more targeted and equity-centered recommendations.

TABLE 1:
Overview of Practitioner Demographics

Staff Name	State	Professional Title	Institution Type
Owen	New York	Director-Level	2-year public
Tara	New York	Director-Level	4-year public
Megan	Pennsylvania	Director-Level	4-year private, nonprofit
Elise	Iowa	Director-Level	4-year private, nonprofit
Page	California	Executive Leadership	4-year public
Eric	Texas	Director-Level	4-year private, nonprofit
Rachel	Georgia	Director-Level	4-year public
Reina	Washington	Executive Leadership	4-year public
Lucas	Ohio	Executive Leadership	4-year private, nonprofit
Hannah	Minnesota	Director-Level	2-year public
Derek	Colorado	Director-Level	2-year public
Allison	Nebraska	Director-Level	4-year private, nonprofit
Lina	Indiana	Executive Leadership	4-year public
Monica	Indiana	Executive Leadership	4-year public

Note. Names of practitioner participants have been anonymized for confidentiality. Director-level positions include the following titles: Assistant Director, Associate Director, and Director of Career Services. Executive leadership positions include the following titles: Executive Director, Managing Director, and Vice President of Career Services.

TABLE 2:

Overview of Student Demographics

Student Name	State	Institution Type	Degree Program	Major
Alina	Washington	2-year public	Associate degree program	Social science
Leila	California	2-year public	Associate degree program	Arts and humanities
Gianni	Massachusetts	4-year private, nonprofit	Bachelor's degree program	Social science
Eden	Texas	4-year public	Bachelor's degree program	Business
Morgan	Louisiana	4-year public	Bachelor's degree program	Health professions
Kai	New York	4-year public	Bachelor's degree program	Physical sciences, mathematics, and computer science
Imani	Louisiana	4-year public	Bachelor's degree program	Business
Corinne	Illinois	4-year public	Bachelor's degree program	Engineering
Sienna	Delaware	4-year public	Bachelor's degree program	Biological sciences, agriculture, and natural resources
Chase	District of Columbia	4-year private	Bachelor's degree program	Social science
Aria	California	4-year public	Bachelor's degree program	Engineering
Valentina	Georgia	4-year public	Bachelor's degree program	Physical sciences, mathematics, and computer science
Leanna	Virginia	4-year private, nonprofit	Bachelor's degree program	Biological sciences, agriculture, and natural resources
Tiana	Ohio	4-year public	Bachelor's degree program	Social science
Dante	Pennsylvania	4-year private, nonprofit	Bachelor's degree program	Social sciences
Joseph	Pennsylvania	4-year private, nonprofit	Bachelor's degree program	Social sciences
Paula	Massachusetts	4-year private, nonprofit	Bachelor's degree program	Social science
Randy	Indiana	4-year public	Bachelor's degree program	Health professions
Nyla	Pennsylvania	4-year private, nonprofit	Bachelor's degree program	Social sciences
Avery	Indiana	4-year public	Bachelor's degree program	Health professions
Veronica	Texas	4-year public	Bachelor's degree program	Social science
David	Indiana	4-year public	Bachelor's degree program	Physical sciences, mathematics, and computer science
Samira	Texas	4-year public	Bachelor's degree program	Biological sciences, agriculture, and natural resources

Note. Student participant names were anonymized for confidentiality. Students were enrolled full time, taking at least 12 credits per semester.

Endnotes

- 1 Students often select their majors early in the admissions process, and pathway-focused advising in high school has become increasingly common. Evidence from guided pathways models suggests that embedding structured academic and career advising within clear program maps can improve student outcomes by supporting informed decision-making and aligning coursework with career goals (see Thomas R. Bailey, Shanna Smith Jaggars, and Davis Jenkins, *Redesigning America's Community Colleges: A Clearer Path to Student Success* [Cambridge, MA: Harvard University Press, 2015]).
- 2 Rachel Baker, Eric Bettinger, Brian Jacob, and Ioana Marinescu, "The Effect of Labor Market Information on Community College Students' Major Choice," *Economics of Education Review* 65 (August 2018): 18–30; Michelle Van Noy et al., *How Colleges and Universities Are Using Labor Market Information (LMI): A National Snapshot* (New Brunswick, NJ: Education and Employment Research Center, Rutgers University, May 2023); Monica Reid Kerrigan et al., *Emerging Insights into the Use of Labor Market Information in Postsecondary Education* (New Brunswick, NJ: Education and Employment Research Center, Rutgers University, May 2023).
- 3 Melinda M. Karp et al., *Effective Advising for Postsecondary Students: A Practice Guide for Educators* (Washington, DC: National Center for Education Evaluation and Regional Assistance [NCEE], Institute of Education Sciences, U.S. Department of Education, October 2021); Integrating Career Advising for Equitable Student Success: A Higher Education Landscape Analysis (Washington, DC: American Association of State Colleges and Universities, National Association of Student Personnel Administrators, and Advising Success Network, 2021); Nichole Torpey-Saboe et al., *State Opportunity Index 2025: Quality Coaching* (Indianapolis and Washington, DC: Strada Education Foundation, 2025).
- 4 We want to acknowledge that students may access LMI from a variety of sources. However, the bulk of this work focused on career services-centered supports. Given scope and space, we limited the analysis to the most commonly cited sources. Future outputs of this work will expand the analysis to other spaces where students engage with LMI, including employment settings and family networks.
- 5 We want to acknowledge that students may access LMI from a variety of sources. However, the bulk of this work focused on career services-centered supports. Given scope and space, we limited the analysis to the most commonly cited sources. Future outputs of this work will expand the analysis to other spaces where students engage with LMI, including employment settings and family networks.
- 6 Albert Bandura, *Self-Efficacy: The Exercise of Control* (New York: W.H. Freeman, 1997).
- 7 Nancy Acevedo-Gil, "College-conocimiento: Toward an Interdisciplinary College Choice Framework for Latinx Students," *Race Ethnicity and Education* 20, no. 6 (November 2017): 829–850; Stephanie M. Breen, "Networks That Matter: An Exploratory Case Study on the Significance of Peer Networks for Graduate School Choice Among Students of Color in a McNair Program" (PhD diss., University of Maryland, College Park, 2023); Nicole E. Holland, "The Power of Peers: Influences on Postsecondary Education Planning and Experiences of African American Students," *Urban Education* 46, no. 5 (September 2011): 1029–1055; Rod Missaghian, "Social Capital and Post-Secondary Decision-Making Alignment for Low-Income Students," *Social Sciences* 10, no. 3 (March 2021): 83; Shweta Mishra, "Social Networks, Social Capital, Social Support and Academic Success in Higher Education: A Systematic Review with a Special Focus on 'Underrepresented' Students," *Educational Research Review* 29 (February 2020): 100307; Anne-Marie Núñez and Alex J. Bowers, "Exploring What Leads High School Students to Enroll in Hispanic-Serving Institutions: A Multilevel Analysis," *American Educational Research Journal* 48, no. 6 (December 2011): 1286–1313.
- 8 Autumn L. Cabell, Dana Brookover, Amber Livingston, and Ila Cartwright, "It's Never Too Late: High School Counselors' Support of Underrepresented Students' Interest in STEM," *Professional Counselor* 11, no. 2 (2021): 143–160; Alberto F. Cabrera and Steven M. La Nasa, "Understanding the College-Choice Process," *New Directions for Institutional Research* 2000, no. 107 (Fall 2000): 5–22; Melinda M. Gibbons et al., "Evaluation of an SCCT-Based Intervention to Increase Postsecondary Awareness in Rural Appalachian Youth," *Journal of Career Development* 47, no. 4 (August 2020): 424–439; Víctor M. Hernández-Gantes and Edward C. Fletcher, "The High School Career Academy as a Model for Promoting Technological Preparation: Promising Practices and Challenges in the United States," in *Vocational Education and Training in the Age of Digitization*, ed. Eveline Wuttke, Jürgen Seifried, and Helmut Niegemann (Leverkusen, Germany: Verlag Barbara Budrich, 2020), 225–248; Edward C. Fletcher Jr., Nathalie Q. Warren, and Víctor M. Hernández-Gantes, "Preparing High School Students for a Changing World: College, Career, and Future-Ready Learners," *Career and Technical Education Research* 43, no. 1 (May 2018): 77–97; Laura Owen, Timothy A. Poynton, and Raean Moore, "Student Preferences for College and Career Information," *Journal of College Access* 5, no. 1 (2020), <https://scholarworks.wmich.edu/jca/vol5/iss1/7>; Thomas Torre Gibney and Mary Rauner, "Education and Career Planning in High School: A National Study of School and Student Characteristics and College-Going Behaviors. REL 2022-127," (Washington, DC: U.S. Department of Education, Institute of Education Sciences, Regional Educational Laboratory West, November 2021); John Sludden and James J. Kemple, "High School Advising: Exploring NYC Students' Perceptions of School-Based Support for College and Career Transitions. Research Report," (New York: Research Alliance for New York City Schools, October 2024).
- 9 The interview protocol included questions about multiple institutional sources of career information. Although participants occasionally referenced other campus actors, these mentions were limited and did not emerge as salient themes during analysis.

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Strada Education Foundation is a national nonprofit foundation that supports programs, policies, and organizations that strengthen connections between postsecondary education and opportunity in the U.S., with a focus on helping people who face the greatest challenges. We engage education providers, employers, communities, policymakers, and a variety of collaborators, including funders and state, regional, and national organizations. Working alongside our partners, we are aiming for a triple win: better results for learners, more agile education and workforce systems, and stronger, more resilient economies.

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