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Acknowledgments

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Background

To ensure the relevance and quality of programs and credentials, higher education institutions are considering better aligning with industry needs and supporting students' transition to careers. At the same time, over the past decade, more data have become available to help inform institutional efforts on the labor market.[1] This labor market information (LMI) includes a range of information such as more recently available "real-time jobs" data – that is, job postings gathered from across the internet and deduplicated and coded to identify job openings and their requirements, as well as traditional sources of data from state labor departments, industry advisory boards, and other informal networks. Real-time jobs data have become increasingly available in recent years through the proprietary systems of LightCast (formerly Burning Glass and EMSI) and Jobs EQ, who offer their data services to higher education institutions nationwide. At the same time, many states have developed their own information tools based on state wage records, and state labor departments continue to produce and distribute traditional data on the labor market. The rapid development and expansion of these data tools for examining labor market trends seem to offer the potential to alter how higher education institutions approach their understanding of the labor market and inform what they do. Current empirical investigations of these issues are limited, as we document in a systematic review.[2]

Rutgers Education and Employment Research Center (EERC) investigated colleges' and universities' LMI usage to illuminate these trends. We examined how this changing environment is reflected nationally in higher education practice using case studies of institutional practices at ten colleges and universities.[3] Then, to explore the national landscape, we surveyed individuals with LMI familiarity at educational institutions to examine how and why they used LMI. This report highlights the findings from this survey. We begin by describing our methodology. Next is a discussion of our findings, which is organized into two sections: one on the institutional motivations and uses for LMI and another on the institutional barriers and supports for using LMI. We end the paper with several recommendations for policy and practice on LMI usage by educational institutions.

1   Advance CTE. (2017, November). *Putting labor market information in the right hands: A guide.* https://careertech.org/resource/putting-lmi-right-hands-guide; College Excellence Program. (2016, September 8). *Using labor market information to improve student success*. Aspen Institute. https://www.aspeninstitute.org/publications/using-labor-market-data-improve-student-success/

2   Bjorn, G. & Kerrigan, M.R. (2023). *The Evolution, Conceptualization, and Use of Labor Market Information (LMI) in Postsecondary Institutions: A Systematic Literature Review*. EERC Working Paper, Piscataway, NJ: Education and Employment Research Center, Rutgers University.

3   Kerrigan, M.R., Coty, V., Lenahan, J., Bjorn, G., & Van Noy, M. (2023). *Emerging insights into the use of labor market information in postsecondary education*. Rutgers Education and Employment Research Center.

Methods

Survey Design.[4] We partnered with the Bloustein Center for Survey Research (BCSR; New Brunswick, NJ) to develop the "Labor Market Information Use at Higher Education Institutions" questionnaire. Preliminary survey items were developed using the findings from ten case studies exploring how higher education institutions used LMI. After refining the survey items and questionnaire for several months, we constructed the survey in Qualtrics, an online survey tool, then solicited feedback from experts in higher education, including college practitioners, academics, and association leaders. Two higher education professionals conducted pretests of the survey in 2021 and shared their feedback before it was finalized. Additional methods details are reported in Appendix A.

Survey Sample. Because the population of LMI users in higher education is undefined, our next task was to formulate a reasonable sample of higher education professionals to field the survey. Based on conversations with case study participants, we constructed a list of job titles we expected would use LMI in their work or know how LMI is used at their respective institutions. We then purchased contact information for higher education professionals with these job titles from a higher education directory provider, Higher Education Publications (HEP). We supplemented our outreach to those on the list we purchased from HEP by sharing the survey with case study participants, higher education professionals who participated in the case study selection process, higher education membership groups, and state-level higher education groups. We also shared the survey via social media posts.

Data Collection. We worked with researchers from BCSR to pursue two streams of survey outreach and data collection: outreach to those on the purchased directory, which was conducted by the BCSR team, and our own outreach to higher education professionals. The first group of contacts were sent closed survey links that allowed the BCSR team to track the response status of each individual. The BCSR team sent initial survey invitations to the purchased list of contacts via Qualtrics on 28 February 2021; data collection continued for nine weeks. During this time, the EERC team led the second stream of outreach to higher education professionals using anonymous survey links. Anyone who saw the link could access and respond to the survey, and recipients were invited to forward the survey to any appropriate colleagues.

After data collection ended, the BCSR team conducted tests to ensure that surveys included in the data set were both unique and mostly (i.e., at least 57%) complete. This process resulted in 438 usable responses. Only 429 respondents indicated whether their institution was a two- or four-year institution, however, as shown in Table 1. As a result, our analysis derives from a sample size of 239 two-year and 190 four-year college respondents, totaling 429 respondents. The majority (56%) of participants represented two-year colleges, 229 of which were public institutions (i.e., community colleges) and 10 were private. Among the four-year colleges in our sample there were 101 public and 89 private institutions.

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4   A more detailed discussion of our survey methodology can be found in Appendix A.

TABLE 1. Survey Respondents by Sector

	NUMBER	PERCENTAGE
Two-year public college	239	54%
Two-year private college	10	2%
Four-year public college	101	23%
Four-year private college	89	20%
Valid total	**439**	**100**

Data analysis. We excluded some respondents from the analysis. In addition to the surveys we excluded in the first step for being incomplete, we further excluded findings on private two-year colleges because the sample size (i.e., *n* = 10) was small compared to public two-year colleges (*n* = 229). The remaining analyses do not include public two-year colleges.

Participants. Table 2 shows how participants described their level of involvement with LMI at their institution. More than half of the survey respondents (56%) indicated using LMI reports or products generated by someone else at the institution. Almost half (49%) of respondents directly worked with LMI sources to analyze or generate reports with LMI, and about one-third (33%) indicated that they are involved in creating or overseeing policies and processes for LMI usage.

TABLE 2. Participants' Self-Reported Involvement with LMI by Sector

RESPONSES	TWO-YEAR PUBLIC	FOUR-YEAR PUBLIC	FOUR-YEAR PRIVATE	ALL
Participant involved in creating and/or overseeing policies and processes for LMI use	38%	30%	26%	33%
Participant works directly with information sources to analyze LMI or generate LMI reports	53%	43%	48%	49%
Participant uses LMI reports or products generated by someone else or another group on campus	60%	56%	48%	56%
Participant does not use LMI directly but can address how LMI is used at the institution	10%	23%	25%	17%

Participants' job titles are shown in Table 3. The largest groups of survey respondents were directors, chief executive officers, vice presidents, and provosts – individuals in decision-making positions who were likely to take a broad approach to LMI usage at their institution rather than to apply it at an individual program level. In contrast, roles with more limited program-level knowledge, such as faculty and staff, were the smallest groups of respondents.

Table 3. Participants' Role at Their Institution as Percentage of Sector Respondents

| ROLES	TWO-YEAR PUBLIC COLLEGES	FOUR-YEAR PUBLIC COLLEGES	FOUR-YEAR PRIVATE COLLEGES
Chief Executive Officer	18.34	13.86	22.47
Chief of Staff	0.87	4.95	1.12
Director of Branch Campus	1.31	0	1.12
Vice President	20.09	13.86	7.87
Provost	9.61	22.77	22.47
Instructional Program Dean/ Director	12.23	0.99	2.25
Director	22.71	34.65	37.08
Chief Student Affairs Officer	0.44	0	0.3
Faculty Member	2.18	2.97	0
Other, please specify:	7.42	0.99	1.12
Other, Staff	3.06	3.96	4.49
Other, Vice Chancellor/AVC	1.75	0.99	0
Total Percentage	100	100	100
Total Number	**229**	**101**	**89**

Institutional Motivations and Usages of LMI

To understand how institutions use LMI, we began by examining the types of LMI used by respondents and their motivations for using these data (e.g., their internal purposes for using the LMI and what they seek to learn from it). We then examined how often they used LMI, the stakeholders they shared the data with, and their purpose for discussing the LMI with those stakeholders. In addition to the quantitative analysis of these traits, we share some findings from participants' open-ended responses on the potential impacts of LMI usage. All data are reported in greater detail as tables in Appendix B.

Types of LMI Used.

It quickly became clear that there are myriad types of LMI, as shown in Figure 1. The kind of LMI used most by participating institutions was longstanding federal and state data. Further, public institutions were more likely to report using public data sources. For example, 90 percent of respondents at public two-year colleges and 85 percent of those at public four-year colleges reported using Federal data, such as those from the Bureau of Labor Statistics (BLS), versus about three-quarters (73%) of those at private four-year colleges. Similar

FIGURE 1. Types of LMI Used at Institutions as a Percentage of Respondents
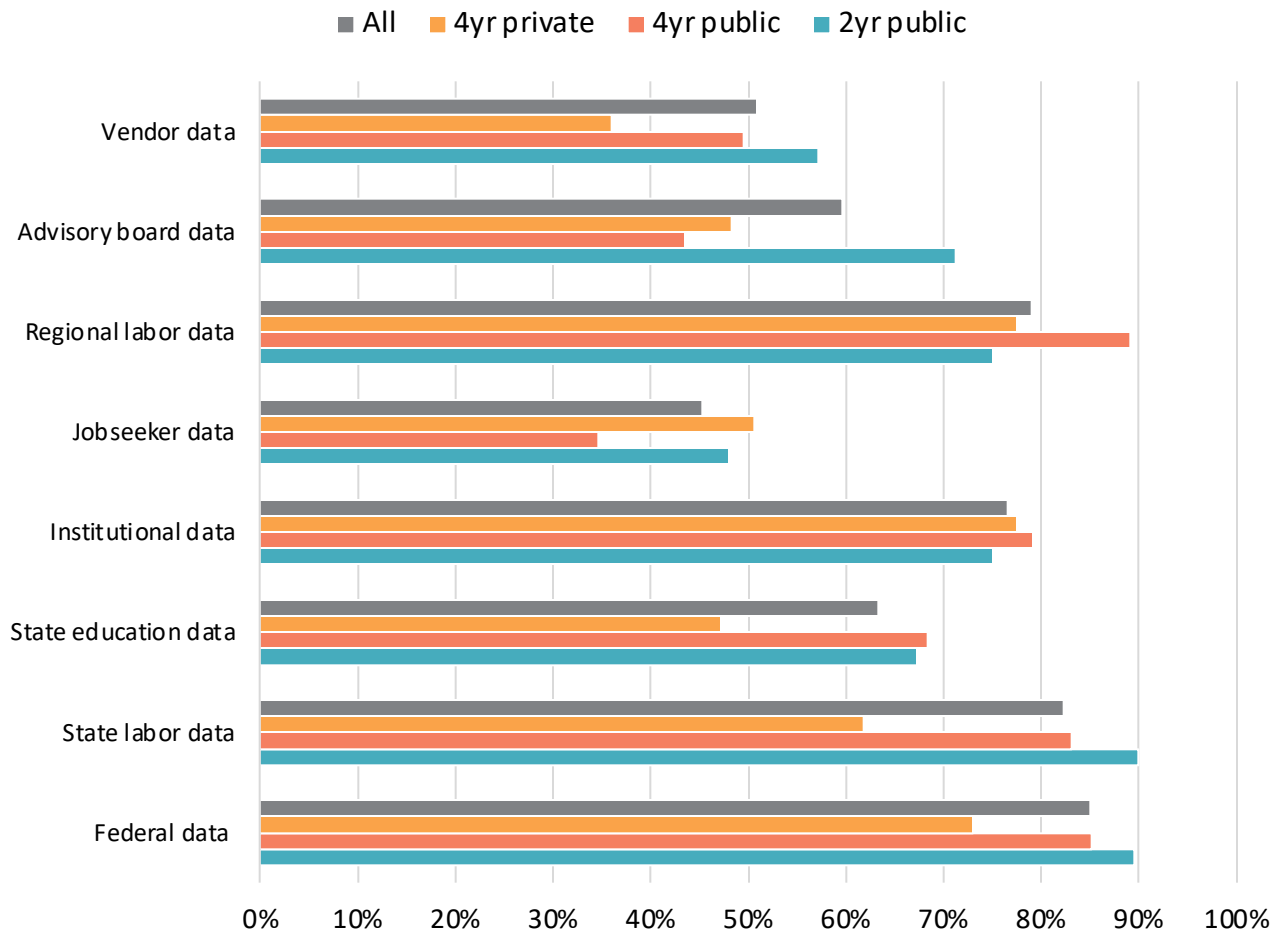
percentages of public institutions used state department of labor data, such as labor projections and workforce demographics. However, fewer respondents at private four-year colleges and universities (62%) reported using this type of LMI. Finally, two-thirds of participants from public two- and four-year colleges and almost half of all participants from private four-year institutions reported using state Department of Education data. Likewise, respondents at all institution types reported using LMI from a workforce development board, higher education system, or other regional entity (75% two-year, 89% public four-year, and 78% private four-year, respectively).

About three-quarters of survey participants across all institutional types indicated that they use LMI collected by their institution, such as employer or alumni surveys. Still, we observed variation among institutional types in using other forms of LMI. For instance, nearly two-thirds of respondents at public two-year colleges (71%) indicated they used LMI from advisory boards. In contrast, fewer than half of those at both public (44%) and private (48%) four-year institutions indicated they used such data. Rather than splitting based on two- versus four-year degree programs, the variation in rates of reported use of vendor data from companies such as Burning Glass or Chmura were related to whether the institution was public or private. While 57 percent of respondents at public two-year colleges and about half of those at public four-year colleges used vendor data, only about one-third (36%) of those at private four-year colleges did so.

What the Institutions Seek to Learn from LMI.

Figure 2 shows that the most common reasons respondents from all institution types turned to LMI were to learn about job or industry growth trends (88% overall) and to research the skills required for jobs (77% overall).

FIGURE 2. What Institutions Seek to Learn from LMI as a Percentage of Respondents

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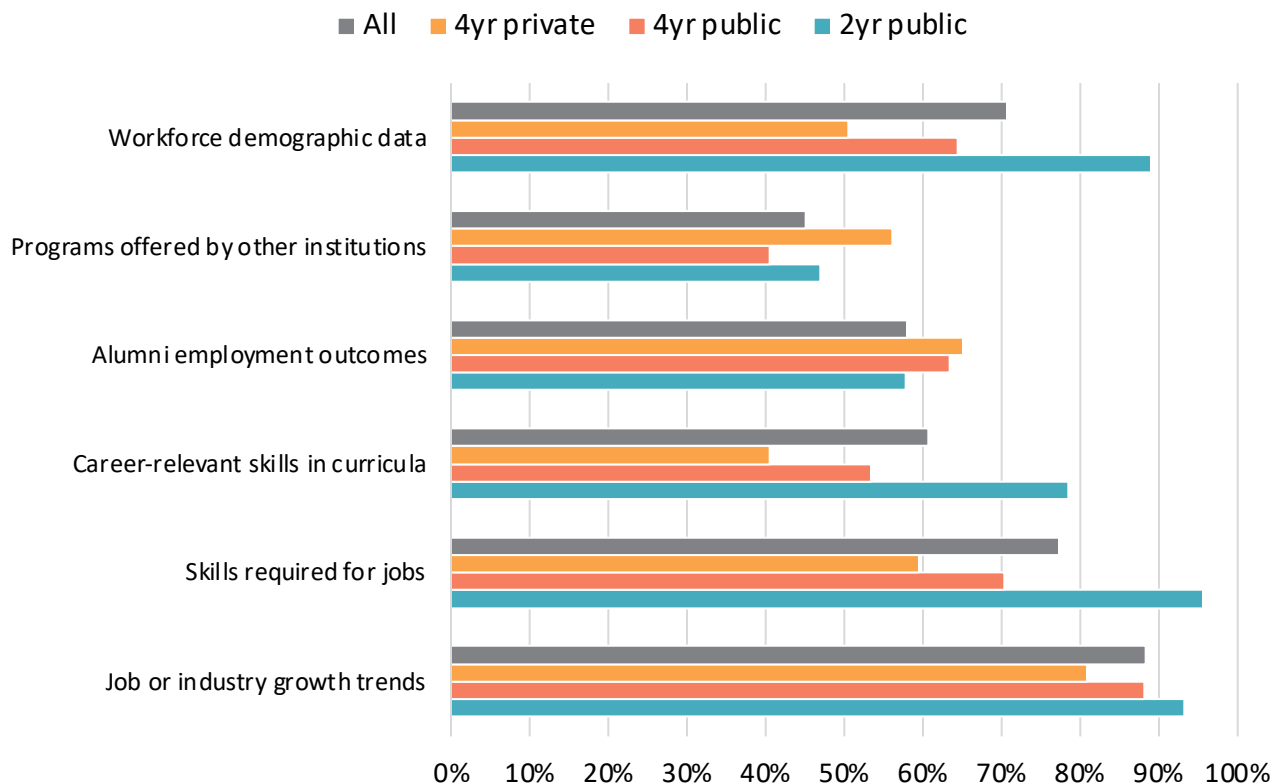
Whereas nearly all (96%) of two-year college respondents indicated using LMI to research the skills required for jobs, that information was sought by only 70 percent of public and 60 percent of private four-year respondents. Notably, the overall rate of respondents seeking information on job skills was skewed downward by respondents at four-year institutions. Similarly, over two-thirds of two-year college respondents (78%) indicated using LMI to learn about career-relevant skills already in curricula versus around half of those at four-year institutions (53% public and 40% private). Respondents from all institution types reported using LMI about equally as often to learn about alumni employment outcomes and degrees or programs offered by other institutions.

Internal Purposes for Using LMI.

As shown in Figure 3, respondents across institutions cited many reasons for using LMI. The most common internal purpose driving participants to use LMI was program development (90% overall). Nearly all respondents at two-year colleges (96%) used LMI for this purpose as well as most of those at four-year institutions (84%

FIGURE 3. Internal Purposes for Using LMI as a Percentage of Respondents
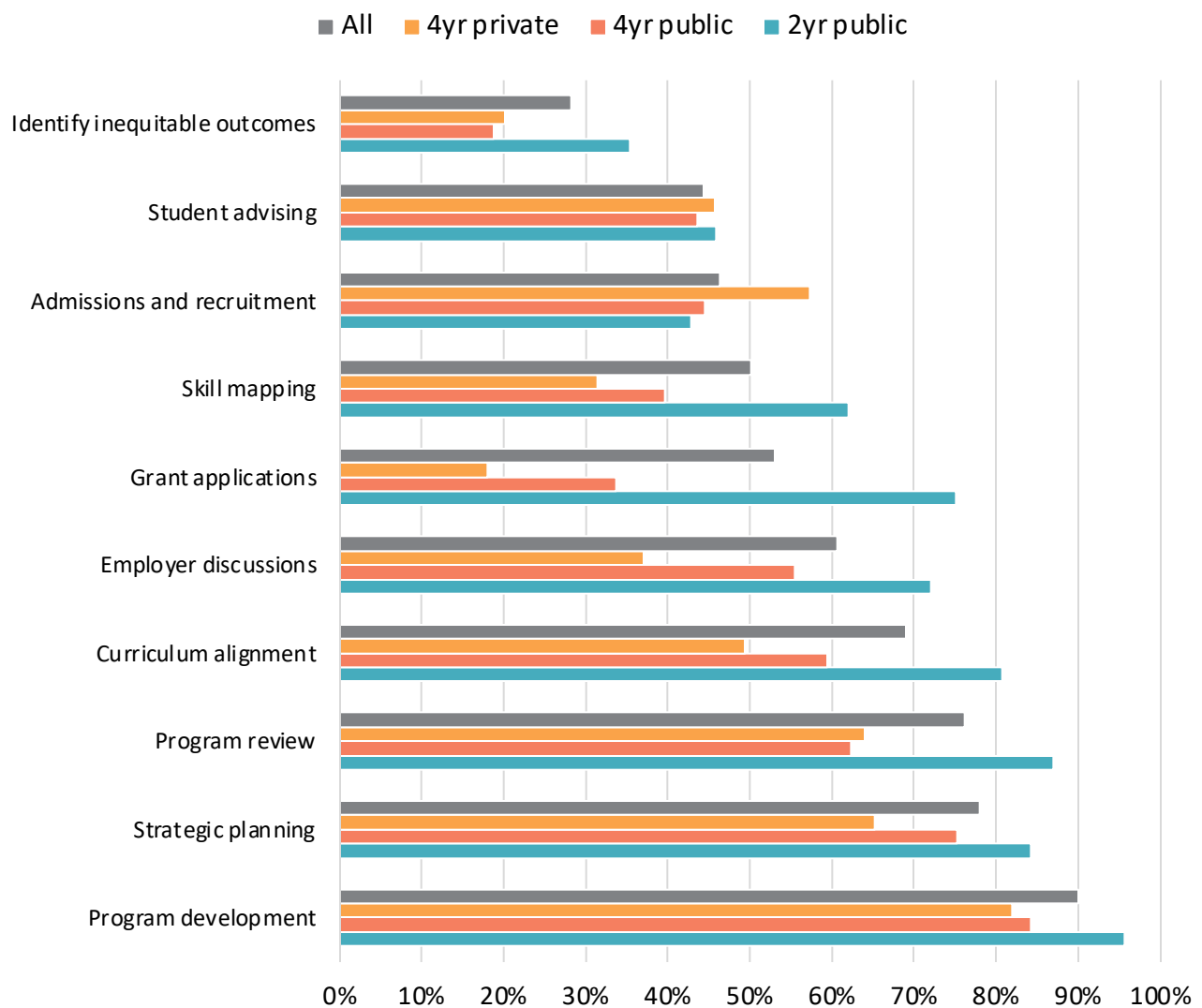
public and 82% private). Over two-thirds of respondents (78% overall) reported using LMI for strategic planning. Reflecting the closer alignment of public two-year programs with the labor market, this number was driven by respondents from those institutions, who reported using LMI for strategic planning at a rate far higher than those at four-year schools (84% two-year vs. 75% four-year public and 65% four-year private). The same pattern was repeated but was more pronounced with regard to the use of LMI for curriculum alignment. Respondents at public two-year colleges were more likely than those at public and private four-year institutions to report they used LMI for that purpose (81% of two-year vs. 59% of four-year public and 49% of four-year private).

Program review was another common reason for using LMI at all institutions (i.e., 87% at public two-year, 62% at public four-year, and 64% at private four-year). Participants indicated five key facets of the program review process affected by the use of LMI: expanding program capacity, closing programs, revising the review process, accreditation, and changing delivery modalities. A survey participant at a private four-year college explained how expanding program capacity was supported by LMI, "We used the data to expand program offerings: for example, the recent addition of an AS in Biology and an AAS in Cyber Security." Another participant noted that at their public four-year college, "occupational projections are used as a basis for expanding program capacity." On the other hand, a participant from a public two-year college reported, "Our institution evaluates the viability of current and proposed degrees and certificates," sometimes using those findings to revise or even close programs. Another participant, this one from a public four-year college, elaborated that "programs that don't measure up are reviewed and considered for sunset. For instance, two years ago, 13 programs were eliminated due to declining market trends or poor post-exit outcomes." In that case, determining program viability included the use of LMI to analyze labor market trends and student outcomes.

Other uses of LMI related to program review included program accreditation and the expansion of delivery methods. According to a private four-year college respondent, "LMI provides a source of program validity, especially for academic programs that do not have program-level accreditation." A private four-year college participant reported using LMI when deciding whether to "expand the delivery methods of our teacher education program to include an accelerated model for paraprofessionals in private and public K-12 systems in our region." In addition to uses related to program review, participants identified several other major reasons for using LMI, including employer discussions (61% overall), preparing funding applications (53% overall), and student advising (44% overall).

Frequency of Use of LMI in Work.

Nearly all of our survey respondents used LMI at work with some frequency. Only 6 percent of all respondents reported using it only rarely. Participants from two-year colleges used LMI on the job more frequently than those from four-year colleges. Of those who reported using LMI 'always' or 'often', most (61%) were from public two-year colleges, followed by those from public, then private, four-year colleges (43% and 29%, respectively).

Motivations for the use of LMI. Mandates (i.e., external and internal policies) impact motivations to use LMI, as shown in Figure 4. The largest reported overall impacts of mandates were internal policies for program review (50% overall), strategic planning (41% overall), curriculum alignment (36% overall), and program development

(34%). External policies also motivated LMI usage across institutions, of which the largest motivators were grant applications (36% overall), program development (35% overall), and program review (22% overall). It is important to remember that, as seen in Figure 3, many LMI applications were not motivated by mandates. For instance, a majority of respondents from all institution types chose to use LMI for student advising (68% overall), employer discussions (67% overall), and skills mapping (58% overall) without being mandated to do so.

FIGURE 4. Motivators of Institutional LMI Usage as a Percentage of Respondents
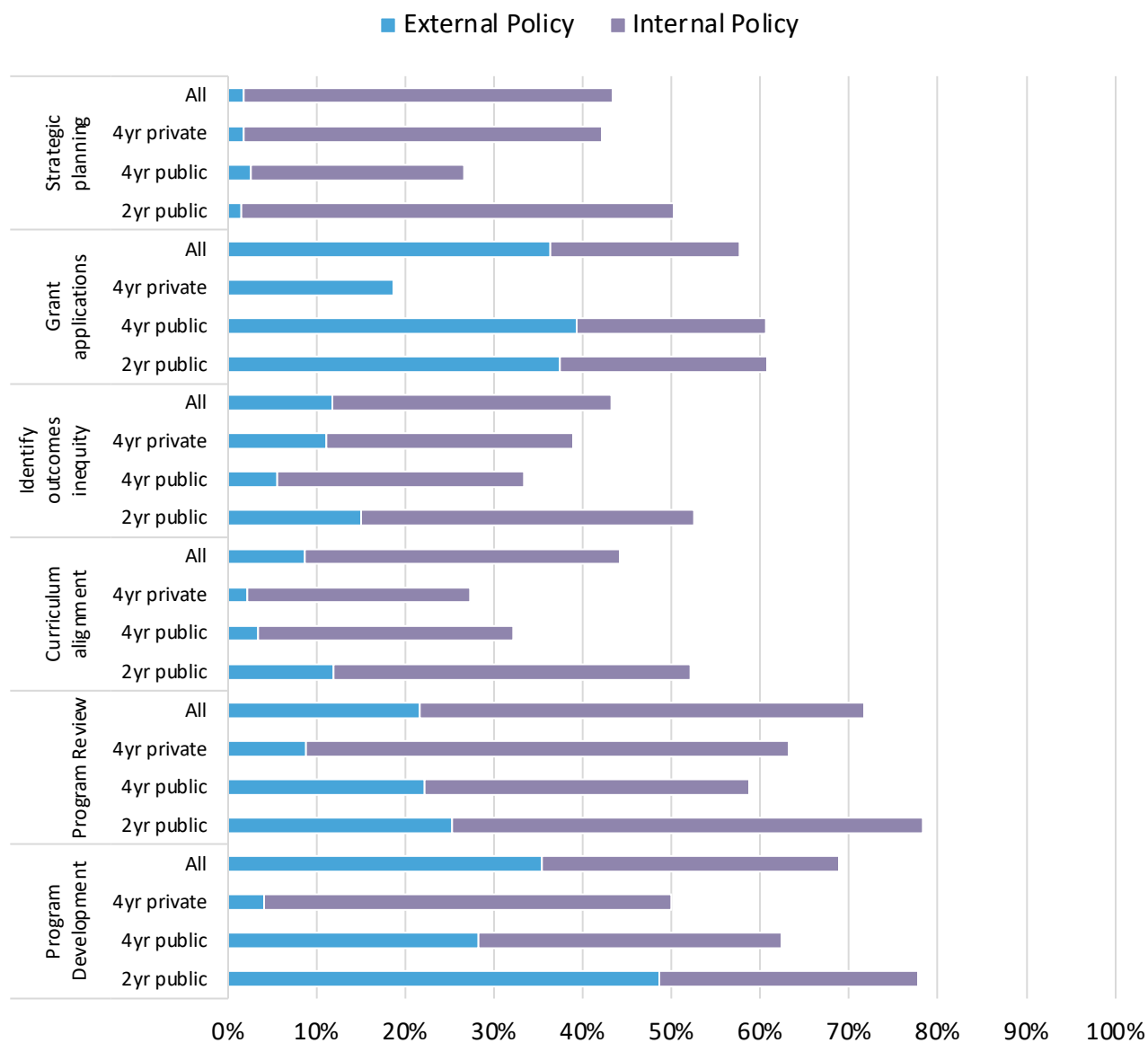
Stakeholders with whom LMI is Shared.

Across all institutions, the most common stakeholders with whom respondents shared LMI were groups and organizations, including advisory boards and workforce development organizations, as shown in Figure 5. Respondents at public two-year colleges were about twice as likely as their counterparts at private four-year institutions to report that they shared LMI with advisory boards (80% two-year vs. 42% four-year private). The relatively higher number of respondents at public two-years who reported sharing LMI with their advisory boards aligns with a broader observation among those participants who used LMI in their work with other external partners, including economic and workforce development organizations and community-based organizations.

FIGURE 5. Organization Stakeholders with Whom Respondents Shared LMI as a Percentage of Respondents
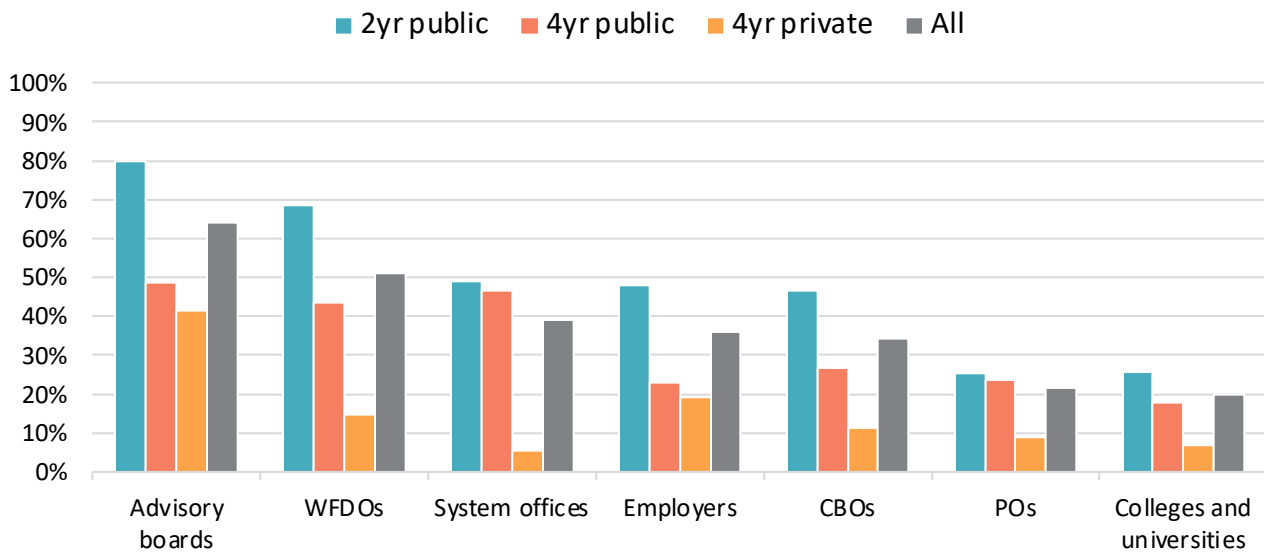
Note. WFDOs = workforce development organizations; CBOs = community-based organizations; and POs = professional organizations

FIGURE 6. Individual Stakeholders with Whom Respondents Shared LMI as a Percentage of Respondents
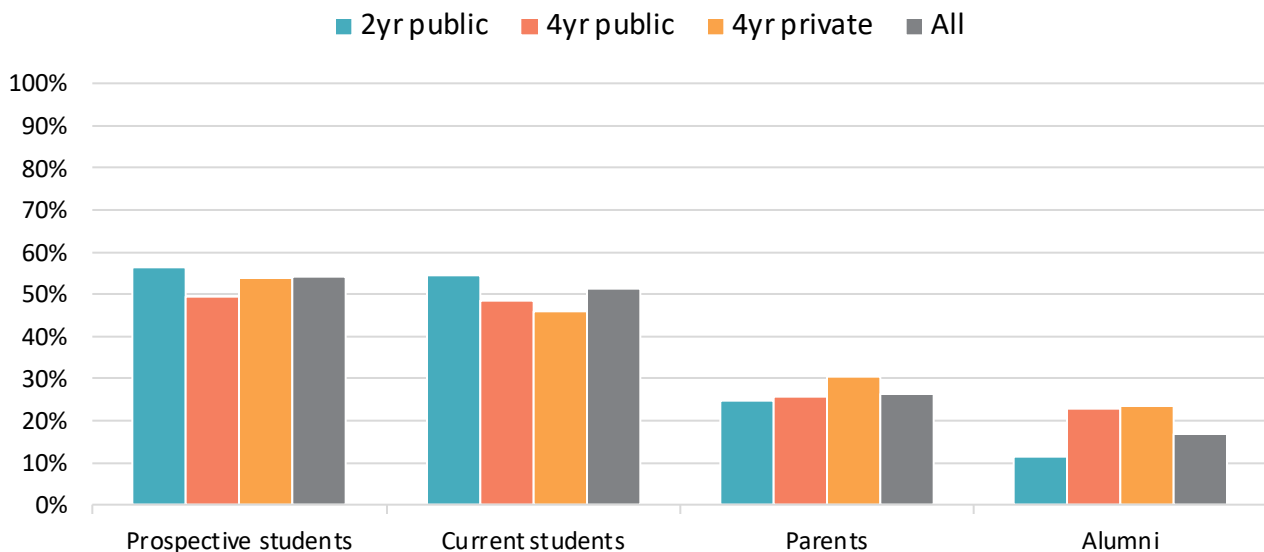
Data displayed in Figure 6 show that in addition to sharing LMI with organizations and external partners, many institutions reported sharing LMI with individuals, including prospective students (54% overall), current students (51% overall), parents (26% overall), and alumni (17% overall). Notably, all types of institutions shared LMI with prospective and current students about equally, at rates hovering around 50 percent. This usage shows that regardless of which credentials are offered by their home institution, about half of the respondents make information about the state of the labor market available to students for making decisions about their career paths.

Purpose of Discussing LMI with Stakeholders.

Respondents reported a variety of purposes for sharing LMI data with external partners, as shown in Figure 7. The purposes most commonly reported by respondents across institutions were to support career pathways and program articulation (64% overall), to support workforce development activities (64% overall), to create a shared context to initiate work together (54% overall), and to support grant-seeking efforts (53% overall). The participants most likely to report sharing LMI for each of these reasons were respondents at public two-year institutions, a finding that is consistent with the higher degree of engagement with external partners using LMI previously observed among that group. (See Figure 5.)

FIGURE 7. Purposes for Discussing LMI with Stakeholders as a Percentage of Respondents
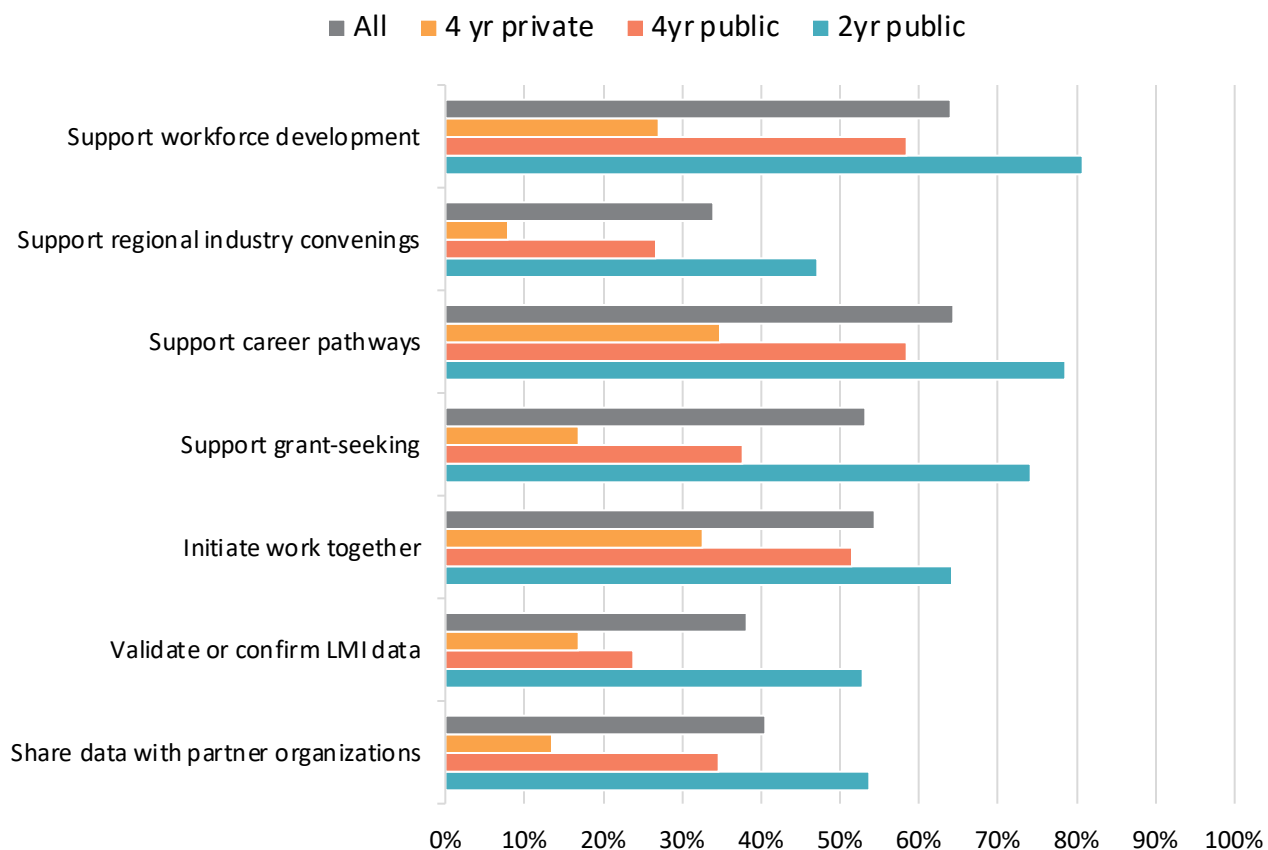
Impact of LMI Usage.

When asked about the impacts of LMI usage, more than half of the 288 participants at all types of institutions who responded to this open-response question indicated that engaging with LMI had positive effects on new program development. A participant from a private four-year college explained how LMI helped his institution with program selection at both the undergraduate and graduate levels, "LMI has been useful in starting new programs over the past two years. We have used it to develop two undergraduate [programs] and one graduate program and decide against another." A participant from a public four-year college reported that LMI helped guide the development of new noncredit programs. "LMI has guided our selection of new noncredit professional certification courses in alignment with in-demand jobs in high-paying occupations." In that case, LMI was helpful for new program development because it provided actionable information about unmet workforce needs and regional stakeholder perspectives. Consulting LMI when developing new programs also helped "to minimize program failures and ensure programs are created that are responsive to local community labor force needs," explained another participant from a public four-year college. Further, a public two-year college participant described how "LMI helped us to recognize where there may be unmet workforce/labor needs that my college could develop a program to meet." Thus, LMI informed colleges from both local and regional workforce perspectives.

Participants who provided open responses about the impacts of COVID-19 on their LMI usage identified two types of effects: program closure and short-term training program development. Concerning program closure, a participant from a public two-year college explained, "These programs [RN-to-BSN nursing program and online associate and bachelor degree programs in Fire and Emergency Services Administration] are now closed to new admissions and will be terminated because of enrollment declines exacerbated by the coronavirus pandemic." With regard to short-term training program development, another respondent from a public two-year college reported that, "at the peak of the pandemic, for example, we used LMI to support efforts to create short-term programs certificates so unemployed people would find better or new jobs." Yet another noted that their institution is "paying closer attention to skills and competencies for short-term training opportunities." Thus, changing labor market conditions related to the COVID-19 pandemic have prompted some colleges to increase their focus on skill development.

Institutional Supports and Barriers to Using LMI

A variety of factors helped support or acted as barriers to the use of LMI among institutions. We sought to understand these various factors. We examined the perceptions of trust in LMI among respondents. Further, we examined the potential supports for the use of LMI, including the institutional capability for LMI usage, institutional support for LMI usage, and external entities that support institutional LMI usage. Finally, we examined the potential barriers to expanding institutional LMI usage and the concerns about LMI.

Perceived Quality of Available LMI.

Respondents varied in their perceptions of the quality of the LMI they had access to, as shown in Figure 8. Using the Workforce Information Advisory Council's (2016) five dimensions of quality, we asked participants about the accuracy, objectivity, relevance, timeliness, and accessibility of LMI.[5] Public two-year respondents were most likely to agree or strongly agree that their LMI met each of these five quality criteria. The weakest quality dimension across all three sectors was timeliness, with two-thirds (66%) of public two-year respondents indicating that they thought their LMI was timely and about half of public and private four-year college respondents indicating such (59% four-year public and 47%, four-year private).

FIGURE 8. Perceived Quality of LMI By Sector, either Agreed or Strongly Agreed, as a Percentage of Respondents

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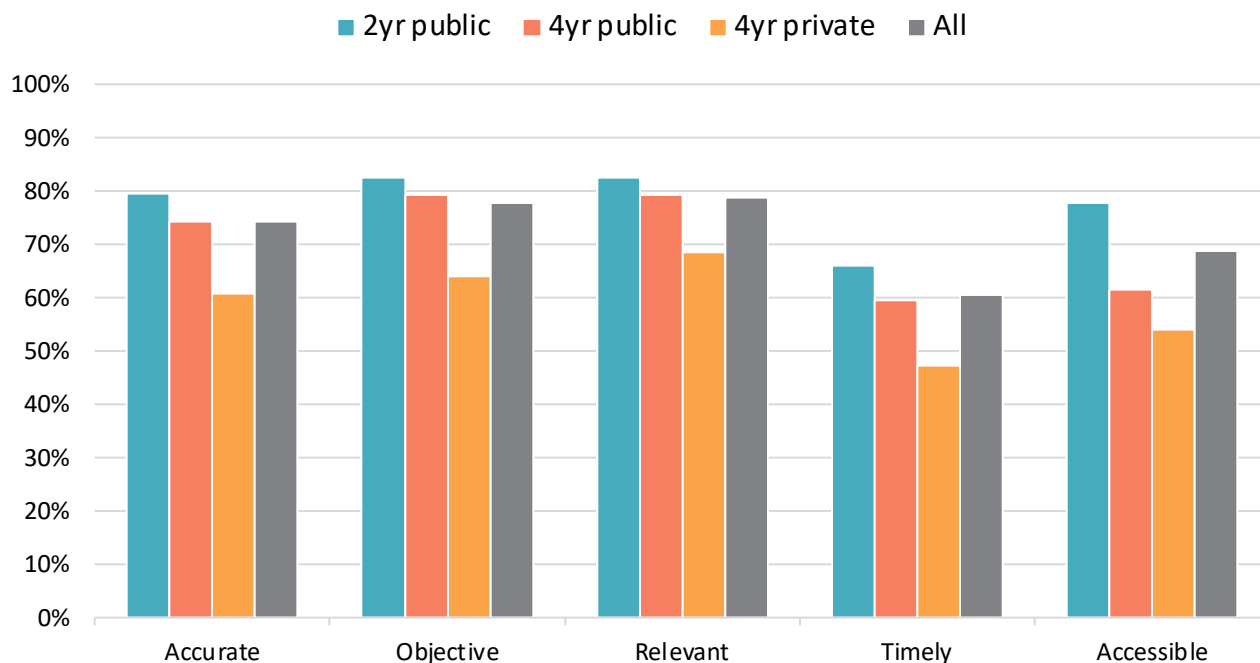
5   Workforce Information Advisory Council. (2016). *The importance of workforce and labor market information*. U.S. Department of Labor. https://www.dol.gov/sites/dolgov/files/ETA/wioa/pdfs/Informational_Handout.pdf

When survey participants indicated concerns with LMI, data quality was a major theme. Across all three sectors they indicated concerns with data quality, particularly with regard to LMI's accuracy, relevance, and timeliness. While most participants across institution types indicated data accuracy as a major concern, there were nuances between two- and four-year colleges in their reporting of other concerns related to data quality.

Data accuracy and relevance were significant concerns for participants from public two-year colleges. A participant explained that "data often reflects large workforce areas or by state. It is not always reflective of the rural community in which we operate," wrote one two-year college participant. Another two-year college participant explained relevance this way: "info is not available specific to our needs." For those at public four-year schools, the major concerns were with data accuracy and timeliness. For instance, a participant from one such institution expressed concerns about the "accuracy and timeliness of outside data sources, specifically BLS data." At the same time, another noted that it was "knowing whether LMI data are accurate/comprehensive/up-to-date." A participant from a private four-year college explained that "the data lag is significant when dealing with LMI." Thus, participants from both two-year and public four-year colleges noted concerns about LMI's accuracy. Still, those at two-year schools were further concerned about the relevance of the data to their students and program offerings, whereas timeliness was a more frequent concern among those at four-year colleges.

Participants from all types of institutions indicated data concerns on the theme of trustworthiness. These concerns were data transparency, lack of content, and insufficient staff preparation to use LMI reliably. Another set of concerns respondents from all institution types seemed to agree on had to do with the misunderstanding, misuse, and misinterpretation of LMI data. These are summarized by one participant as the "inability of end users to understand the data." Concerning misuse, another participant expressed concerns "about the misuse of the LMI we provide. LMI should be considered one important factor among a variety of other factors that ultimately lead to program creation and/or modification." Concerning misinterpretation, a participant explained:

> All data have strengths and weaknesses; too often, data are interpreted without considering limitations. Also, occupational and industry taxonomies are becoming increasingly less descriptive of the labor market. Thus, analysis is often performed at levels of granularity that mask underlying trends—especially in new, emerging, or evolving employment, occupational, or skill demands.

Thus, skillful data interpretation and analysis are particularly important in evolving labor market conditions.

Institutional Capabilities for LMI Usage.

When asked about their institution's capabilities for LMI usage, half of the survey respondents from public institutions (48% two-year and 50% four-year) indicated that their institution had the capability to engage in required reporting plus limited additional analyses. These data are shown in Figure 9. The private four-year institutional respondents were less likely to report having that capability (34%), which makes sense given the more extensive compliance reporting that public institutions undertake. Twenty percent of public two-year college respondents, 26 percent of public four-year college respondents, and 39 percent of private four-year respondents indicated that their institution only could engage in the minimum analysis and reporting required

FIGURE 9. Institutional Capabilities for LMI Usage as a Percentage of Respondents
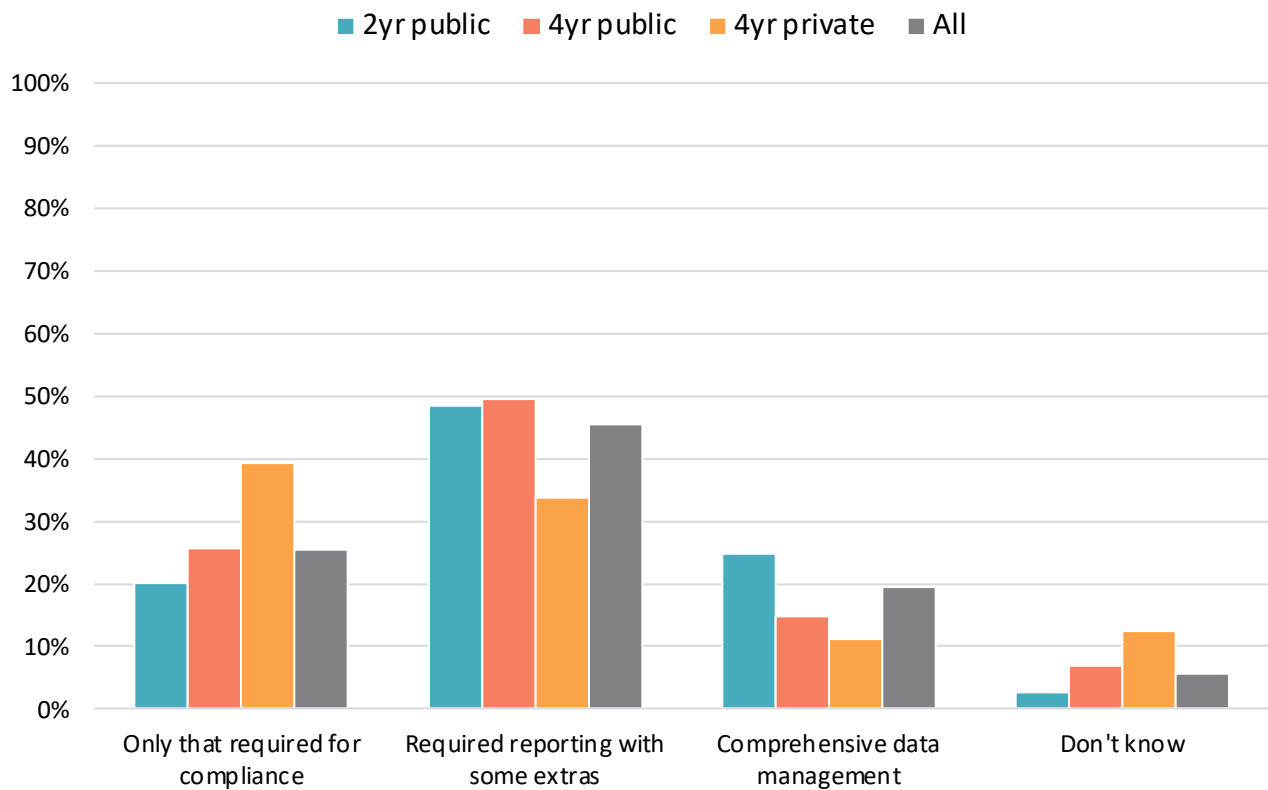

for compliance purposes. In contrast, a quarter of respondents from public two-years, 15 percent of those from public four-year, and only a tenth of respondents from private four-years reported that their institution had comprehensive data collection, analysis, and reporting capabilities.

Institutional Support for LMI Usage.

There was a notable lack of institutional support for LMI usage reported by respondents from all three sectors, as shown in Figure 10. Respondents from public two-year colleges were consistently the most likely to indicate that their college provided support. Even then, only 52 percent reported that their college provided funding to purchase LMI products or services. The next most common form of institutional support received by 40 percent of public two-year respondents was dedicated staff to support the collection, analysis, dissemination, and use of LMI. As we have seen among other survey items, respondents from public colleges tended to indicate more support for and usage of LMI than those from private four-year institutions. One area in which the respondents answered consistently across all three sectors was in developing policies or processes. Overall, about 17 percent of respondents indicated that their institution had policies or processes for using LMI.
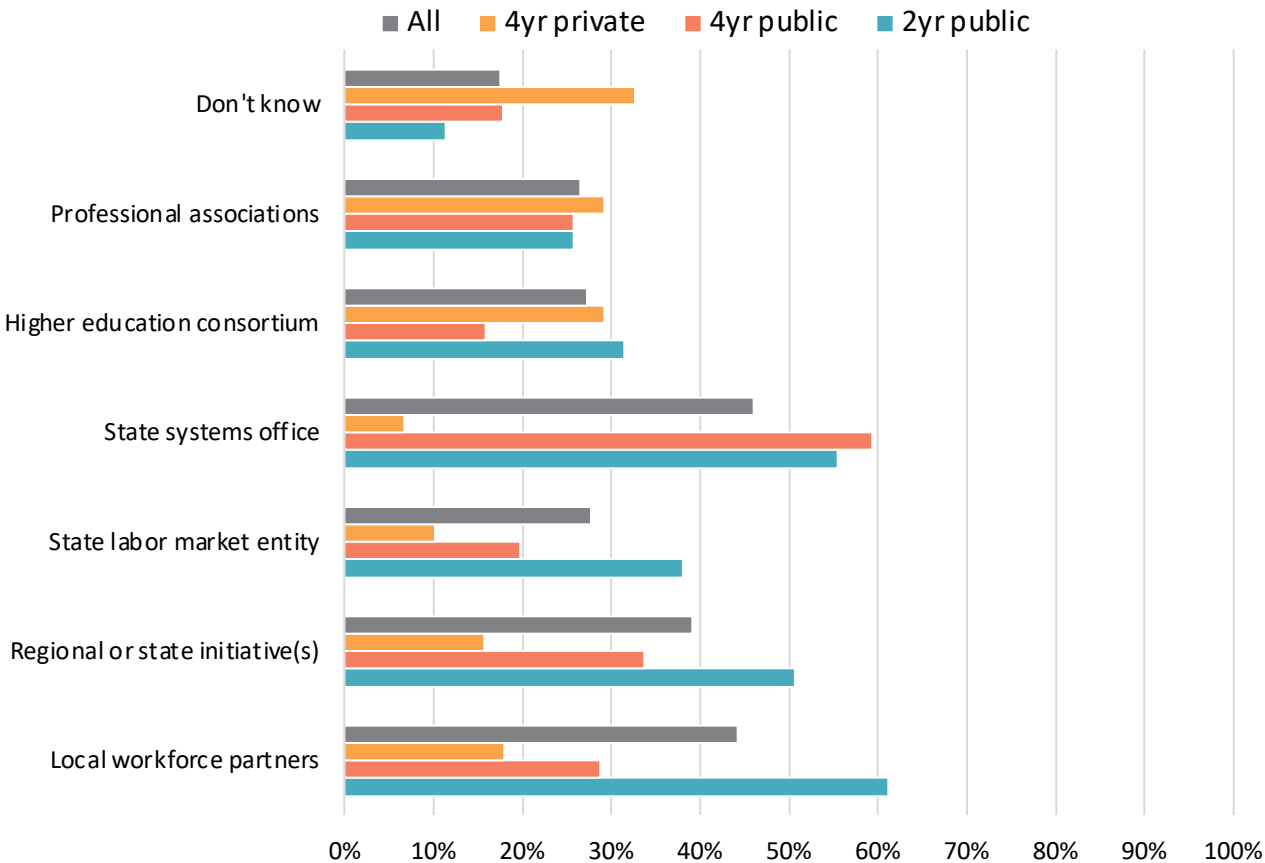
FIGURE 10. Institutional Support for LMI Usage as a Percentage of Respondents
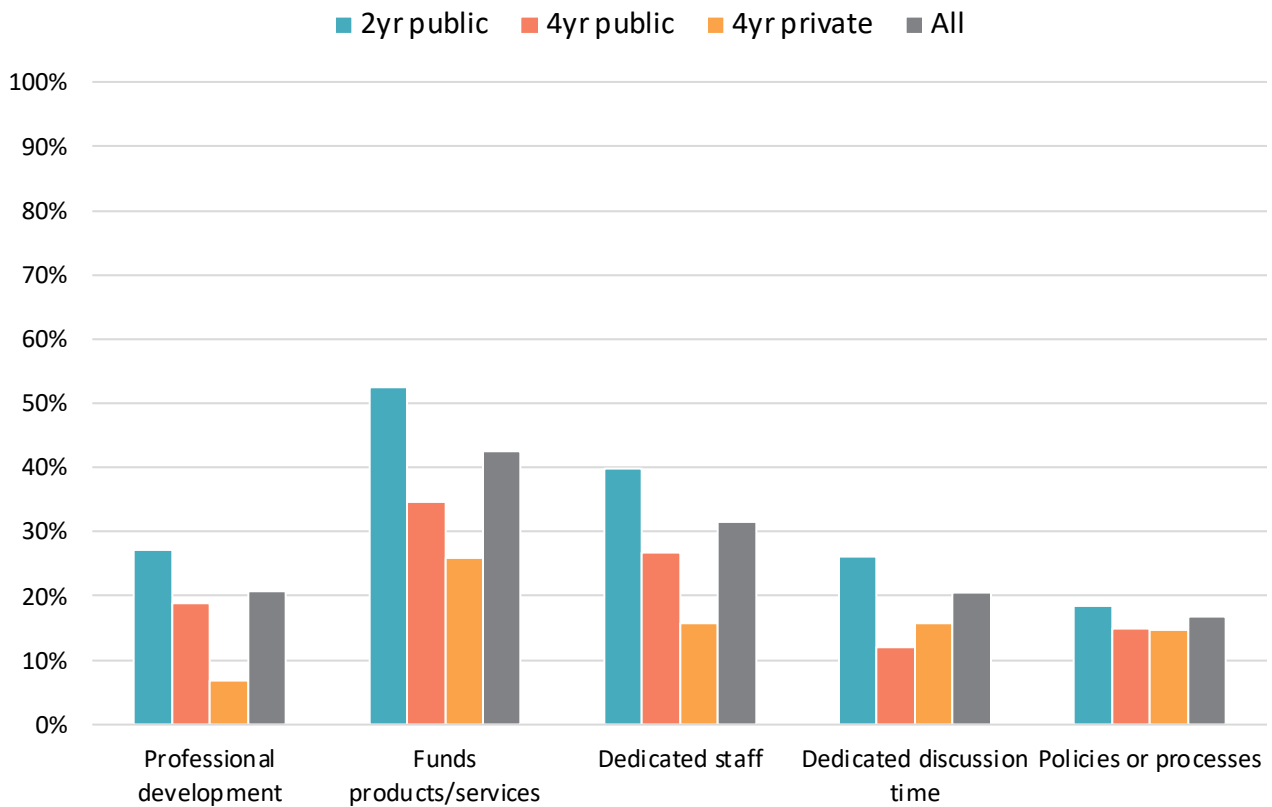
External Entities that Support Institutional LMI Usage.

The external support for LMI usage varied significantly by sector but did not exceed about two-thirds of respondents, as shown in Figure 11. The most common form of external support was that provided by local workforce board partners to public two-year institutions (61% of two-year vs. 29% four-year public and 18% four-year private). About half of the respondents from both two-year and public four-year colleges (55% and 59% vs. 7% four-year private) identified state system offices as supporters of institutional LMI usage. Half of the public two-year respondents (51%) also indicated that regional or state sector initiatives supported LMI usage at their institution. However, only 34 percent of public four-year and 16 percent of private four-year respondents identified this as a support. Similarly, respondents from public two-year institutions were most likely to indicate support from a state labor market planning entity such as California's Centers of Excellence (38% two-year vs. 20% four-year public and 10% four-year private). Just under 30 percent of respondents from across all three sectors indicated that professional associations were a source of external support for LMI usage (26% overall). Finally, while nearly one-third of public two-year (31%) and private four-year (29%) respondents reported receiving the support of consortiums, only about 16 percent of those from public four-year institutions received that support.

FIGURE 11. External Entities that Support Institutional LMI Usage as a Percentage of Respondents

Legend: ■ All   ■ 4yr private   ■ 4yr public   ■ 2yr public

Categories (top to bottom): Don't know, Professional associations, Higher education consortium, State systems office, State labor market entity, Regional or state initiative(s), Local workforce partners. X-axis: 0% to 100%.

Barriers to Expanding Institutional LMI Usage.

Unlike other survey questions that ask about the nature of use or types of data used, the barriers to expanding LMI usage were reasonably consistent across the sectors, as shown in Figure 12. Nearly 80 percent of all respondents indicated that dedicated time for staff to conduct data-informed decision-making was a barrier to expanding LMI's use (79% overall), while only 30 percent of respondents indicated that leadership support for data-informed decision-making was a barrier. A majority of respondents overall identified other staff-related issues as barriers, including 76 percent cited a lack of preparation for interpreting and using LMI, 71 percent indicated concerns about the technical skills of staff to access or use LMI, and 63 percent cited issues with communication or the sharing of LMI data across departments.

Notably, there were two barriers that private four-year colleges were more likely to identify as issues at their institutions. One was access to needed LMI sources or metrics (72% of four-year private vs. 58% of two-year and 57% of four-year public). The other was the cost of gaining access to the data, which was cited as a barrier by 78 percent of private college respondents (vs. 56% of two-year and 59% of four-year public).

FIGURE 12. Barriers to Expanding Institutional LMI Usage as a Percentage of Respondents

Either Major or Minor Barrier
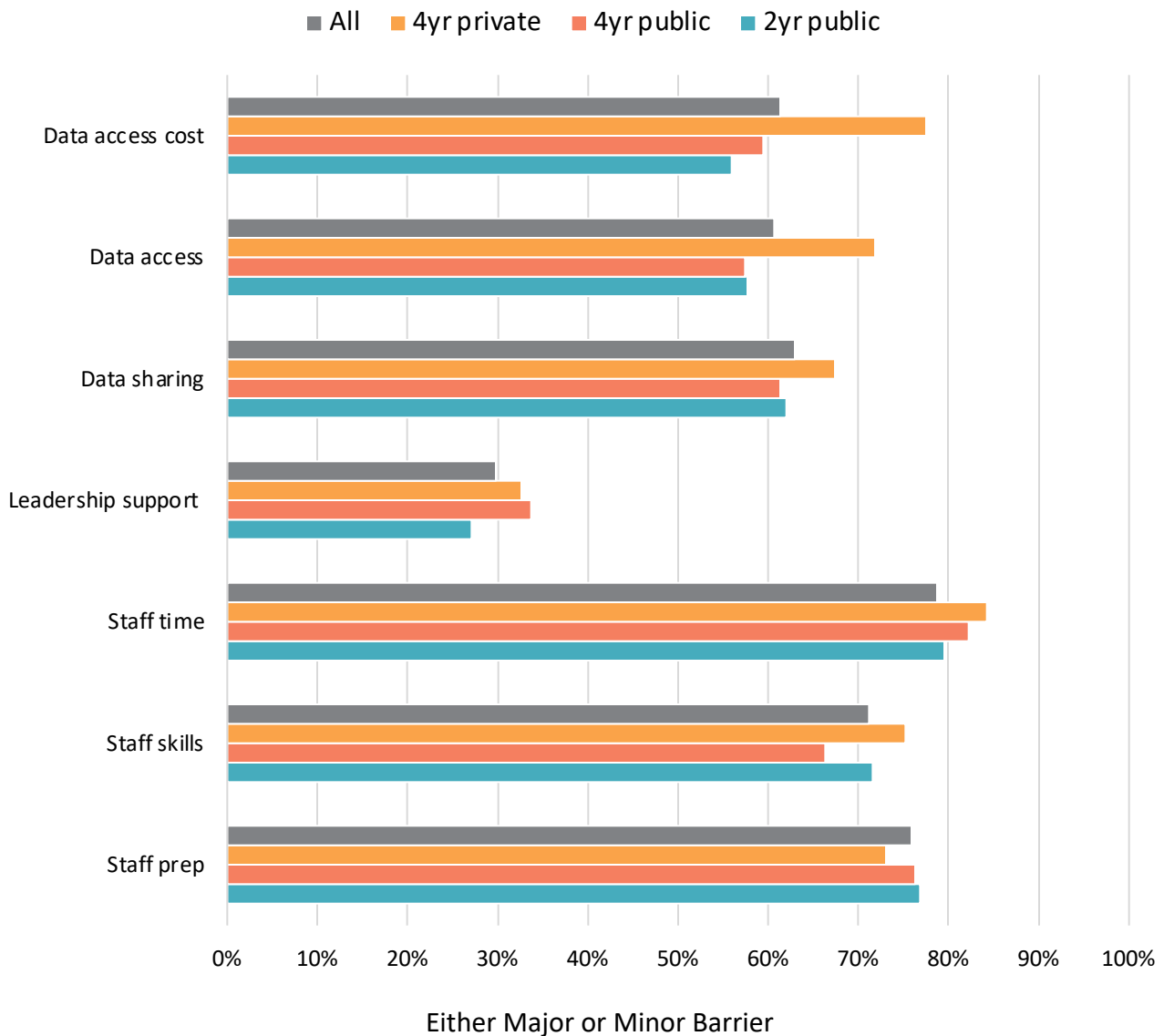
Concerns About LMI.

Almost three-quarters (72% overall) of our survey participants across all categories indicated they had no concerns about LMI usage at their institutions. Similarly, when asked if others at their institution had raised concerns about LMI, a sizable group across all three sectors indicated either no such concerns had been raised (32% overall) or that they were unaware of any concerns (35% overall). Examples of data concerns from survey participants echoed the barriers identified by survey participants and displayed in Figure 12. The concerns of a public four-year college participant included "updated job titles, skills, wages, and lag in data reporting." A private four-year college participant expressed concerns about the "accuracy of government data, timeliness of data, and accuracy of proposed forecast models." Participants from all types of colleges indicated multiple and various data concerns.

Recommendations

As the economy shifts and the labor market responds to various crises and conditions, LMI has become increasingly relevant. LMI represents a significant opportunity for postsecondary institutions to understand better how their organizations and programs align with the changing labor market. We have demonstrated that LMI is useful for new program development, existing program review, curriculum alignment to valuable job skills, strategic planning, and winning grant funding. However, as our survey findings demonstrate, questions remain about the cost, sharing, and quality of LMI as well as the staff time and skill required to analyze and interpret the data. As a result, we offer several recommendations to three significant stakeholders: educational institutions, employers, and policymakers. Specific stakeholders can do the following to promote LMI quality and usage to improve higher education:

Educational institutions

» Develop institutional policies and procedures supporting data infrastructure, sharing, and LMI usage discussions. Specifically, policies and procedures should integrate multiple LMI sources and usages across divisions and departments to support current and future LMI purposes and initiatives.

» Prepare faculty and staff members to understand, use, and interpret LMI through ongoing, long-term professional development that includes dedicated time for learning and discussions.

» Collaborate with other institutions, agencies, state entities, and employer partners to advocate for more affordable, timely, accurate, and context-relevant LMI.

Employers and local workforce partners

» Extend collaboration efforts – including workforce development efforts, industry convenings, and career pathways programs – to four-year colleges while continuing to support two-year colleges.

» Share timely, relevant, and accessible skill information to support collaborations.

Policymakers

» Expand the external support of state entities (e.g., state systems offices, departments of labor, and state/regional initiatives) to a network of higher education institutions.

» Expand policy support to improve access to various types of LMI, reduce data access costs, and help colleges overcome other barriers to expanding LMI usages (e.g., supporting college staff professional development and data sharing across institutions and regions).

Appendix A. LMI Survey Methodology

Survey Design

The Rutgers Education and Employment Research Center (EERC) team partnered with staff from the University's Bloustein Center for Survey Research (BCSR) to develop the "Labor Market Information Use at Higher Education Institutions" survey questionnaire, which was designed to collect information on how higher education institutions and professionals use LMI. Survey items were developed based on findings gleaned from ten case studies (i.e., the case studies revealed purposes for using LMI, and those purposes were incorporated into survey items). We collaborated with the BCSR team to refine the survey items and questionnaire over several months, then built the survey using the online survey tool, Qualtrics. Two pretests were conducted in 2022 to facilitate feedback from higher education professionals with experience at two- and four-year institutions.

Based on conversations with case study participants, we constructed a list of job titles we expected would use LMI in their work or know how LMI is used at their respective institutions. We then purchased contact information for higher education professionals with these job titles. We supplemented our outreach to those on the list we purchased from HEP by sharing the survey with case study participants, higher education professionals who participated in the case study selection process, higher education membership groups, and state-level higher education groups. We also shared the survey via social media posts.

Survey Sample

We sought to field the survey to individuals who use LMI in colleges and universities nationwide. There was no defined list of LMI users to contact to field the survey, nor was there an existing list of job titles or roles typically using LMI. To formulate a reasonable sample of higher education professionals to field the survey, we compiled a list of job titles that were likely to know how LMI is used at their respective institutions based on conversations with case study participants. These titles included CEO/president, chief of staff, chief academic officer/provost, workforce development, and institutional research. The team then purchased the contact information of higher education professionals with these titles from a higher education directory provider, Higher Education Publications (HEP). The HEP directory included 9,887 non-duplicated contacts representing 3,668 institutions and higher education systems. For context, in 2020–21, there were 3,931 Title IV degree-granting institutions in the US, according to NCES.[6]

The survey sample also included individuals identified by previous respondents as appropriate study participants. The final items of the survey instrument asked respondents to identify colleagues they believed used LMI in their work and to share their contact information. Each week these referral contacts were compiled and sent an invitation to participate in the survey.

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6 National Center for Education Statistics. (2022). Table 105.50. Number of educational institutions, by level and control of institution: 2010–11 through 2020–21 [Data table]. In Institute of Education Sciences *Digest of education statistics.* US Department of Education. https://nces.ed.gov/programs/digest/d22/tables/dt22_105.50.asp

We supplemented this outreach by sharing the survey with case study participants, higher education professionals who helped connect us with potential case study sites, higher education membership groups, and state-level higher education groups. The survey was shared with 55 participants from 10 case study institutions and 17 facilitators. Several higher education groups shared a link to the survey with their constituents via mass email or by including a message in their newsletters: the State Higher Education Executive Officers Association, the University System of Georgia, the Nebraska Department of Education, the Michigan Public Two-year Association, and the Aspen Institute shared the survey via mass email, and the National Council for Workforce Education and the National Coalition of Advanced Technology Centers shared the survey via their newsletters.

Social Media Outreach

Social media outreach was a component of study recruitment. We chose LinkedIn.com as the social media outreach platform because its unique focus on career and professional networking allowed us to target our study population of academic administrators and leaders specifically. We used a snowball strategy by sharing the study recruitment posts on the PI's LinkedIn.com page, followed by reposting from research team members. We used two versions of the recruitment study posts, each containing an anonymous link to the survey and varying by color (i.e., red or blue) and text length (i.e., one short and one long). The recruitment posts achieved 30 reposts, 67 reactions, and two comments.

Data Collection

We pursued two streams of survey outreach and data collection: closed survey outreach to contacts from the sample purchased from HEP and open outreach via email to case study participants, higher education groups, and social media. The terms *closed* and *open* refer to the types of survey links used by the EERC and BSCR teams for the two streams of survey outreach. *Closed links* are associated with contacts' email addresses and are unique to each contact. Generating closed links to distribute surveys to the HEP contacts and the colleagues they referred to the study allowed the BCSR team to track which survey response belonged to each respondent. The *open link* was not unique; anyone who clicked the link could take the survey. Members of both teams embedded the open survey link into email messages, newsletters, and social media blurbs to reach appropriate participants not included in the HEP sample.

Survey data collection began on 28 February 2022 when the BSCR team sent survey invitations via the Qualtrics mailer to the contact list purchased from HEP. Six reminder emails were sent to the HEP contacts – one approximately every ten days through May 2nd.

Partial surveys were included in the data analysis if at least 57 percent of the survey items were answered. Only the "Goals and Uses" section of the survey was required to be completed in full. After applying these filters, 243 responses were routed out of the survey, 90 of which were taken using closed links. The 108 surveys that remained in the sample were included in the data analysis (58 from the closed survey; 50 from the open survey).

Data collection took place over nine weeks. Toward the end of this period, we learned that emails sent via the Qualtrics mailer often ended up in the recipient's spam folders. To be sure that each HEP contact received at least one email about the study and survey, we sent email messages with the EERC's Outlook address to all the HEP contacts who had not completed or had only partially completed (<57%) the survey. Those who had not taken the survey yet, and those who had started the survey but had not completed at least 57 percent, were invited to click the open link embedded in the email message to take the survey. Asking these partial completers to restart the survey using the open link did not create any issues with duplicated responses because their original partial responses to the closed survey link they received were ineligible for inclusion in the data analysis.

After the responses were collected and the surveys closed, additional testing was performed to confirm that a single respondent did not submit multiple surveys. In some cases, an IP address was repeated in various responses. Still, different time stamps and responses to survey items implied that this resulted from colleagues completing the survey at the same location. The EERC and BCSR teams collected 438 responses (222 from the closed survey; 216 from the open survey), as shown in Table 4. The 222 responses to the closed survey represented 2.4 percent of the contact list purchased from HED.

TABLE 4. Sample Size of Usable Surveys

USABLE SURVEYS	NUMBER
Complete	330
Partial >=57%	108
Total	438

Further, as shown in Table 5, 56 percent of respondents were affiliated with two-year colleges, while 44 percent were affiliated with four-year colleges. We excluded any findings from private two-year colleges because the sample (N = 10) was small compared to the 229 public two-year colleges. Also, the two-year private college sector, overall, is small.

TABLE 5. Respondents' Affiliation

INSTITUTION TYPE	NUMBER	PERCENTAGE
Two-year	239	55.7
Four-year	190	44.3
Valid total	429	100

Survey Instrument

Welcome Thank you for participating in the Rutgers University Labor Market Information Survey. We define Labor Market Information (LMI) as data about employment by location and occupation, labor supply and demand, earnings, unemployment, and demographics of the labor force. This can include data from government and paid sources, as well as information gathered from employers and alumni. Throughout the survey, please hover over the acronym LMI to see this definition again.

Before we begin, we would like to collect some background information on your institution, your role, and how you use LMI. We will not report on how specific institutions or individuals use LMI. All data will be reported in the aggregate. We will use this background information to group similar responses for our analysis.

- -

What is the name of your institution? _____

Is your institution public or private?

☐ Public

☐ Private

Is your institution nonprofit or for-profit?

☐ Nonprofit

☐ For-profit

Does your institution primarily offer two- or four-year degrees?

☐ Two-year

☐ Four-year

Which of the following best describes your role at your institution?

☐ Chief Executive Officer

☐ Chief of Staff

☐ Director of Branch Campus

☐ Vice President

☐ Provost

☐ Instructional Program Dean or Director

☐ Director

☐ Chief Student Affairs Officer

☐ Faculty Member

☐ Other, please specify: _____

Which of the following best describes your department/unit at your institution?

☐ Academic Department (please specify): _____

☐ Student Affairs

☐ Career Services

☐ Institutional Research/Institutional Effectiveness

☐ Workforce Development

☐ Admissions/Enrollment Management

☐ Marketing/Student Recruitment

☐ Facilities/Campus Planning

☐ Other, please specify: _____

Which of the following best describes how you work with LMI? Select all that apply.

☐ I am involved in creating and/or overseeing policies and processes for LMI use

☐ I work directly with information sources to analyze LMI or generate LMI reports

☐ I use LMI reports or products generated by someone else or another office on campus

☐ I do not use LMI directly but can address how labor market information is used at my institution

☐ I do not know how LMI is used at my institution

Display This Question:

If Which of the following best describes how you work with LMI? Select all that apply.

I do not know how LMI is used at my institution = Yes

You have indicated that you do not know how LMI is used at your institution.
Is this correct?

☐ Yes

☐ No

Display This Question:

If You have indicated that you do not know how LMI is used at your institution.

Is this correct? = Yes

The goal of this survey is to understand the many ways higher education institutions use labor market information. Therefore, if you know of anyone at your institution who use these data and can speak to how these data are used, please include their name and contact information below. We will send them a link to this survey and give them an opportunity to respond.

Thank you for your time.

- Name _____
- Institution _____
- Title _____
- Email Address _____

Which of the following best describes how you use/work with *LMI*? Select all that apply.
- ☐ I am involved in creating and/or overseeing policies and processes for LMI use
- ☐ I work directly with information sources to analyze LMI or generate LMI reports
- ☐ I use LMI reports or products generated by someone else or another office on campus
- ☐ I do not use LMI directly but can address how labor market information is used at my institution
- ☐ I do not know how LMI is used at my institution

You indicated that you use LMI or know how LMI is used by others at your institution.

The following questions ask about how LMI is used at your institution: which types are used, how LMI is accessed, and the purposes for which your institution use it. When answering these questions, to the best of your knowledge, please think about how LMI is used **at your institution.**

What types of *LMI* are used at your institution? Select all that apply.
- ☐ "Real-time jobs" / Online job ads / Resumes (e.g., jobseeker data derived from online resumes)
- ☐ Federal data (e.g., BLS/O*Net, U.S. Department of Education, Census/ACS/LEHD)
- ☐ State Department of Labor data (e.g., labor projections, workforce demographics)
- ☐ State Department of Education data (e.g., degrees conferred, State Longitudinal Data Systems)
- ☐ Regional data compiled by a workforce board, higher education system, or other regional entity (e.g., regional labor projections, degrees conferred by local institutions)
- ☐ Data collected by your institution (e.g., employer or alumni surveys, LinkedIn follow-up)
- ☐ Information from advisory boards (e.g., employers, alumni)
- ☐ Data purchased from vendors (e.g., Burning Class, Chmura, Emsi)
- ☐ Other, please specify:_____
- ☐ I do not know
- ☐ I do not personally use LMI

Which items best describe what your institution seeks to learn from *LMI*?

☐ Job or industry growth trends

☐ Skills required for jobs

☐ Career-relevant skills already included in your curricula

☐ Alumni employment outcomes

☐ Degrees/programs offered by other institutions

☐ Workforce demographic data

☐ Other, please specify:_____

☐ I do not know

The following questions ask about the purposes for LMI use at your institution and the policies surrounding LMI use. When answering these questions, to the best of your knowledge, please think about how LMI is used **at your institution.**

For what internal purposes are *LMI* used at your institution? Select all that apply.

☐ New program development

☐ Existing academic program review (e.g., 3- or 5-year review)

☐ Skill mapping (identifying career-relevant skills in courses and programs)

☐ Curriculum alignment (identify career-relevant skills to add to courses and programs)

☐ Inform and guide discussions with employer partners

☐ To identify inequitable outcomes among students and alumni

☐ Admissions recruitment/outreach to potential students

☐ Advising for current undergraduates

☐ Grant applications

☐ Strategic planning

☐ Other, please specify:_____

Display This Question:

If For what internal purposes are LMI used at your institution? Select all that apply. =

New program development

Existing academic program review (e.g., 3- or 5-year review)

Skill mapping (identifying career-relevant skills in courses and programs)

Curriculum alignment (identify career-relevant skills to add to courses and programs)

Inform and guide discussions with employer partners

To identify inequitable outcomes among students and alumni

Admissions recruitment/outreach to potential students

Advising for current undergraduates

Grant applications

Strategic planning

Other, please specify:

Carry Forward Selected Choices from "For what internal purposes are LMI used at your institution? Select

You've identified that your institution uses *LMI* for the following purposes.

Are any of these mandated by external (state, federal, or private funder) or internal (program, department, or system level) policies or regulations?

	External policy	Internal policy	Not mandated	I do not know
New program development (x1)				
Existing academic program review (e.g., 3- or 5-year review) (x2)				
Skill mapping (identifying career-relevant skills in courses and programs) (x3)				
Curriculum alignment (identify career-relevant skills to add to courses and programs) (x4)				
Inform and guide discussions with employer partners (x5)				
To identify inequitable outcomes among students and alumni (x6)				
Admissions recruitment/outreach to potential students (x7)				
Advising for current undergraduates (x8)				
Grant applications (x9)				
Strategic planning (x10)				
Other, please specify: (x11)				

To what extent does your academic review process use *LMI*?

☐ A great deal

☐ Considerably

☐ Moderately

☐ Slightly

☐ I do not know

To what extent does your strategic planning process use *LMI*?

☐ A great deal

☐ Considerably

☐ Moderately

☐ Slightly

☐ I do not know

Does your institution discuss or share *LMI* with any of the following stakeholders? Select all that apply.

☐ Advisory boards

☐ Employers (not advisory board members)

☐ Economic and workforce development organizations

☐ Community-based organizations

☐ Professional organizations

☐ System office

☐ Other colleges and universities

☐ Current students

☐ Parents

☐ Prospective students

☐ Alumni

☐ Other, please specify:_____

☐ I do not know

☐ My institution does not discuss or share LMI with any stakeholders

For what purposes does your institution discuss *LMI* with stakeholders?

(e.g., Advisory boards, Employers, Economic and workforce development organizations, Community-based Organizations, System offices)

Select all that apply.

☐ To share data with partner organizations

☐ To validate or confirm LMI data

☐ To create a shared context to initiate work together

☐ To support grant-seeking efforts

☐ To support career pathways and program articulation

☐ To support regional convenings of industry (e.g., sector strategies)

☐ To support workforce development efforts

☐ Other, please specify:_____

The following questions ask about your personal usage and perceptions of LMI. Please answer the following questions to the best of your ability.

How frequently do you use *LMI* in your work?
- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

How do you work with others to use *LMI?* Select all that apply.
- ☐ I help others
- ☐ I seek help from colleagues within my institution
- ☐ I seek help from people outside my institution
- ☐ Other, please specify:
- ☐ I do not work with others/Not applicable

How much relevant industry experience do you have that helps you make sense of and interpret *LMI*?

☐ A great deal

☐ A moderate amount

☐ A little

☐ None at all

<div style="background-color:#cfe4e0; padding:10px;">

Display This Question:

If Which of the following best describes how you work with LMI? Select all that apply. =

 I am involved in creating and/or overseeing policies and processes for LMI use

I work directly with information sources to analyze LMI or generate LMI reports

I use LMI reports or products generated by someone else or another office on campus

</div>

How often do you meet with employers or advisory boards?

	Monthly	Quarterly	Yearly	As needed	Other	I do not know	I do not meet with employers or advisory boards
In general							
To discuss *LMI*							

Considering how you use LMI and/or how your institution uses LMI, please share an example of how using *LMI* has impacted your institution.

<div style="background-color:#cfe4e0; padding:10px;">

Display This Question:

If Which of the following best describes how you work with LMI? Select all that apply. =

 I am involved in creating and/or overseeing policies and processes for LMI use

I work directly with information sources to analyze LMI or generate LMI reports

I use LMI reports or products generated by someone else or another office on campus

</div>

You previously indicated that you work with LMI. Please think about the quality of LMI to which you personally have access.

The *LMI* I have available to me is:

	Strongly agree	Agree	Disagree	Strongly disagree	I do not know
Accurate					
Objective					
Relevant					
Timely					
Accessible					

Do you have concerns about the use of *LMI*?
☐ Yes
☐ No

Have others at your institution raised concerns about using *LMI?*
☐ Yes, there are concerns
☐ No, there are no concerns
☐ I do not know

Display This Question:

If Do you have concerns about the use of LMI? = Yes

You've identified that you have concerns about using LMI at your institution.
What are **your** concerns about using *LMI?*

Please indicate your institution's capabilities for *LMI* use.

My institution has staff and resources to provide:
☐ The minimum analysis and reporting required for compliance purposes
☐ Required reporting plus limited additional analyses
☐ Comprehensive data collection, analysis, and reporting
☐ I do not know

In what ways does your institution support the use of *LMI*? Select all that apply.
My institution....
☐ Provides professional development for LMI use and interpretation
☐ Provides funding to purchase LMI products and/or services

☐ Has dedicated staff position(s) to support the collection, analysis, dissemination, and use of LMI

☐ Routinely dedicates time for faculty and staff to review and discuss LMI

☐ Has developed policies or processes for using LMI

☐ Other, please specify:

☐ Does not provide targeted support for the use of LMI

What external entities support the use of *LMI* **at your institution? Select all that apply.**

☐ Local workforce board partners

☐ Regional or state sector strategy initiative

☐ State labor market planning entity (e.g., Centers of Excellence)

☐ State systems office

☐ Consortium of other higher education institutions

☐ Professional associations

☐ I do not know

To what extent is each of the following issues a barrier to expanding the use of *LMI* **to support labor data-driven decision making at your institution?**

	Not a barrier	Minor barrier	Major barrier	I do not know
Staff preparation on how to interpret and use LMI				
Technical skills of staff to access or use LMI data systems				
Time for staff to conduct data-informed decision-making activities				
Leadership support for data-informed decision making				
Communication or sharing LMI data across departments				
Access to needed LMI sources or metrics				
The cost of gaining access to the data				

Many colleges assess student learning using a variety of initiatives and technology tools, including reports on the engagement and success of individual students, "early warning" systems, and the collection of data on cohorts of students.

Please indicate your level of agreement with the following statements:

	Strongly agree	Agree	Disagree	Strongly disagree	I do not know/Not Applicable
My college's use of data is more about keeping accreditors and politicians happy than it is about teaching and learning					
My college regularly makes change in the curriculum, teaching practices or student services based on what it finds by using data					
Faculty members at my institution play a central role in deciding how to measure student success					
These data use efforts have improved the quality of teaching and learning at my institution					

To what extent has COVID-19 changed how *LMI* is used at your institution?

☐ Completely

☐ Moderately

☐ Minimally

☐ Did not change

☐ I do not know

Display This Question:

If To what extent has COVID-19 changed how LMI is used at your institution? =

Completely

Moderately

Minimally

In what ways has *LMI* use at your institution changed due to COVID-19?

Are these changes likely to become permanent?

☐ Yes

☐ No

☐ I do not know

Thank you for completing the Rutgers University Labor Market Information Survey sponsored by the Lumina Foundation. We appreciate that you took the time to share your insights into how labor market information is used at your institution.

We would like to send our survey to additional individuals at your institution who use LMI or can speak to how *LMI* is used at your institution.

If there is anyone at your institution to whom you recommend we send this survey, please include their name and contact information below. We will send them a link and give them an opportunity to respond.

- Name _____
- Institution _____
- Title _____
- Email Address _____

If there is a second person you would like to recommend for our survey, please put their contact information below:

- Name _____
- Institution _____
- Title _____
- Email Address _____

Please click here if you would like to join the Education and Employment Research Center mailing list to receive findings from this study and other related research.

Appendix B. Survey Tables for Figures

TABLE B1. Types of LMI Used at Institutions as a Percentage of Respondents (Figure 1)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Federal data (e.g., BLS/O*Net, U.S. Department of Education, Census/ACS/LEHD)	85	90	85	73
State Department of Labor data (e.g., labor projections, workforce demographics)	82	90	83	62
Regional data compiled by a workforce board, higher education system, or other regional entity (e.g., regional labor projections, degrees conferred by local institutions)	79	75	89	78
Data collected by your institution (e.g., employer or alumni surveys, LinkedIn follow-up)	77	75	79	78
State Department of Education data (e.g., degrees conferred, State Longitudinal Data Systems)	63	67	68	47
Information from advisory boards (e.g., employers, alumni)	60	71	44	48
Data purchased from vendors (e.g., Burning Glass, Chmura, EMSI)	51	57	50	36
"Real-time jobs" / Online job ads / Resumes (e.g., jobseeker data derived from online resumes)	45	48	35	51
Other, please specify:	5	5	4	8
I do not know	3	0	0	8
I do not personally use LMI	1	0	1	1

TABLE B2. What the Institution Seeks to Learn from LMI as a Percentage of Respondents (Figure 2)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Job or industry growth trends	88	93	88	81
Skills required for jobs	77	96	70	60
Workforce demographic data	71	89	64	51
Career-relevant skills already included in your curricula	61	78	53	40
Alumni employment outcomes	58	58	63	65
Degrees/programs offered by other institutions	45	47	41	56
Other, please specify:	9	9	13	7

TABLE B3. Internal Purposes for Using LMI as a Percentage of Respondents (Figure 3)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
New program development	90	96	84	82
Strategic planning	78	84	75	65
Existing academic program review (e.g., 3- or 5-year review)	76	87	62	64
Curriculum alignment (e.g., identify career-relevant skills to add to courses and programs)	69	81	59	49
Inform and guide discussions with employer partners	61	72	55	37
Grant applications	53	75	34	18
Skill mapping (identifying career-relevant skills in courses and programs)	50	62	40	31
Admissions recruitment/outreach to potential students	46	43	45	57

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Advising for current undergraduates	44	46	44	46
To identify inequitable outcomes among students and alumni	28	35	19	20
Other, please specify:	5	4	7	4

TABLE B4. Frequency of LMI Usage in Work as a Percentage of Respondents

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Often	40	47	39	25
Sometimes	31	27	33	37
Always	9	14	4	4
Rarely	6	4	8	11

TABLE B5. Motivators of Institutional LMI Usage as a Percentage of Respondents (Figure 4)

		EXTERNAL POLICY	INTERNAL POLICY	NOT MANDATED	I DO NOT KNOW	SUM (CALCULATED)
Program Development	2yr public	49%	29%	19%	4%	100%
	4yr public	28%	34%	27%	11%	100%
	4yr private	4%	46%	43%	7%	100%
	All	35%	34%	25%	35%	
Program Review	2yr public	25%	53%	18%	4%	100%
	4yr public	22%	37%	30%	11%	100%
	4yr private	9%	54%	30%	7%	100%
	All	22%	50%	22%	6%	

		EXTERNAL POLICY	INTERNAL POLICY	NOT MANDATED	I DO NOT KNOW	SUM (CALCULATED)
Curriculum alignment	2yr public	12%	40%	44%	4%	100%
	4yr public	3%	29%	61%	7%	100%
	4yr private	2%	25%	68%	5%	100%
	All	9%	36%	51%	5%	
Identify outcomes inequity	2yr public	15%	38%	39%	9%	100%
	4yr public	6%	28%	50%	17%	100%
	4yr private	11%	28%	56%	6%	100%
	All	12%	31%	39%	9%	
Grant applications	2yr public	37%	23%	36%	4%	100%
	4yr public	39%	21%	39%	0%	100%
	4yr private	19%	0%	75%	6%	100%
	All	36%	21%	39%	3%	
Strategic planning	2yr public	2%	49%	46%	4%	100%
	4yr public	3%	24%	65%	8%	100%
	4yr private	2%	40%	51%	7%	100%
	All	2%	41%	51%	5%	
Student advising	2yr public	1%	28%	64%	7%	100%
	4yr public	0%	18%	77%	5%	100%
	4yr private	0%	25%	69%	6%	100%
	All	1%	25%	68%	6%	
Admissions and recruitment	2yr public	1%	25%	69%	5%	100%
	4yr public	0%	16%	84%	0%	100%
	4yr private	2%	22%	69%	8%	100%
	All	1%	22%	41%	5%	

		EXTERNAL POLICY	INTERNAL POLICY	NOT MANDATED	I DO NOT KNOW	SUM (CALCULATED)
Employer discussions	2yr public	2%	32%	61%	4%	100%
	4yr public	0%	16%	77%	7%	100%
	4yr private	0%	18%	82%	0%	100%
	All	2%	27%	67%	4%	
Skills mapping	2yr public	8%	34%	53%	5%	100%
	4yr public	0%	18%	69%	13%	100%
	4yr private	0%	32%	64%	4%	100%
	All	5%	31%	58%	6%	

TABLE B6. Stakeholders with Whom Colleges Shared LMI as a Percentage of Respondents (Figures 5 and 6)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Advisory boards	64	80	49	42
Prospective students	54	56	50	54
Economic and workforce development organizations	51	69	44	15
Current students	51	55	49	46
System offices	39	49	47	6
Employers (not advisory board members)	36	48	23	19
Community-based organizations	34	47	27	11
Parents	26	25	26	30
Professional organizations	21	25	24	9
Other colleges and universities	20	26	18	7
Alumni	17	11	23	24
I do not know	11	7	17	15
Other, please specify:	8	9	2	13
My institution does not discuss or share LMI with any stakeholders	3	2	3	6

TABLE B7. Purposes of Discussing LMI with Stakeholders as a Percentage of Respondents (Figure 7)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
To support career pathways and program articulation	64	79	58	35
To support workforce development efforts	64	81	58	27
To create a shared context to initiate work together	54	64	51	33
To support grant-seeking efforts	53	74	38	17
To share data with partner organizations	41	54	35	13
To validate or confirm LMI data	38	53	24	17
To support regional convenings of industry (e.g., sector strategies)	34	47	27	8
Other, please specify:	3	3	4	2

TABLE B8. Perceived Quality as a Percentage of Respondents (Figure 8)

RESPONSE CHOICES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Relevant	79%	97	72	28
Objective	78%	97	63	37
Accurate	74%	98	63	37
Accessible	69%	97	63	37
Timely	60%	98	71	29

TABLE B9. Institutional Capabilities for LMI Usage as a Percentage of Respondents (Figure 9)

RESPONSES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Required reporting plus limited additional analyses	46	48	50	34
The minimum analysis and reporting required for compliance purposes	26	20	26	39
Comprehensive data collection, analysis, and reporting	20	25	15	11
I do not know	6	3	7	12

TABLE B10. Institutional Support for LMI Usage as a Percentage of Respondents (Figure 10)

RESPONSE CHOICES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Provides funding to purchase LMI products and/or services	42	98	60	40
Does not provide targeted support for the use of LMI	42	94	41	59
Has dedicated staff position(s) to support the collection, analysis, dissemination, and use of LMI	32	96	66	34
Provides professional development for LMI use and interpretation	21	100	76	24
Routinely dedicates time for faculty and staff to review and discuss LMI	21	97	46	56
Other, please specify:	21	100	80	20
Has developed policies or processes for using LMI	17	91	54	46

TABLE B11. External Entities that Support Institutional LMI Usage as a Percentage of Respondents (Figure 11)

RESPONSE CHOICES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Local workforce board partners	79	97	64	58
State systems office	46	98	91	9
Regional or state sector strategy initiative	39	99	71	29
State labor market planning entity (e.g., Centers of Excellence)	28	99	69	31
Consortium of other higher education institutions	27	99	38	62
Professional associations	26	97	50	50
I do not know	17	87	38	62

TABLE B12. Barriers to Expanding Institutional LMI Usage as a Percentage of Respondents (Figure 12)

RESPONSE CHOICES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
Staff time	79	79	82	84
Staff prep	76	77	76	73
Staff skills	71	72	66	75
Data sharing	63	62	61	67
Data access	61	58	57	72
Data access cost	61	56	59	78
Leadership support	30	27	34	33

TABLE B13. Individual Concerns About Using LMI as a Percentage of Respondents

RESPONSE CHOICES	ALL	TWO-YEAR, PUBLIC	FOUR-YEAR, PUBLIC	FOUR-YEAR, PRIVATE
No, personal concerns	72	67	83	72
Yes, personal concerns	26	29	17	28
No, others' concerns	32	35	28	37
Yes, others' concerns	29	31	25	30
I don't know if others have concerns	35	31	48	31

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