Summary Report

Employer Satisfaction Survey of Workforce Education Programs Spring 2021 Administration

Prepared by

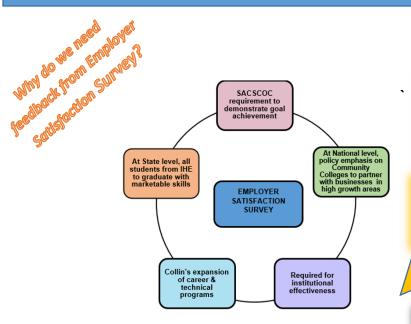
Nasreen Ahmad

Director, Institutional Research

Collin College



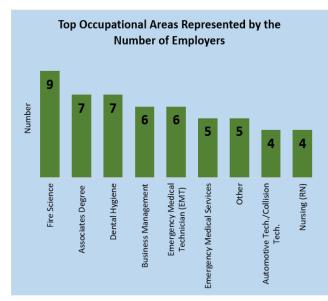
EXECUTIVE SUMMARY: 2021 Employer Satisfaction Survey (ESS) of Collin's Workforce Education Programs:





ROADBLOCK CONTINUES TO BE: Obtaining employer contact information

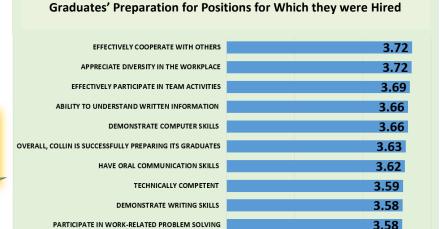
A multipronged methodology is used to deploy the ESS using different modalities



70 responding organizations hired Collin graduates **12** companies sent employees for training 1

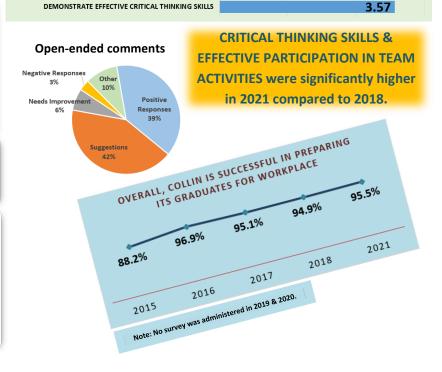
88% of employers hired 1-5 graduates

96% employers "agreed" or "strongly agreed" that Collin is successfully preparing its graduates for workplace



DEMONSTRATE EFFECTIVE CRITICAL THINKING SKILLS

Employers' Mean Response on 4-Point Scale for 11 Prompts about Collin



Executive Summary

A periodic Employer Satisfaction Survey (ESS) is undertaken by the Institutional Research Office (IRO). The ESS has the following objectives: (1) to assess employers' impression of Collin's recent workforce education program graduates and (2) to provide Collin administrators a sense of how effectively they are preparing students to meet the current needs of employers. The insights provided by the survey help academic administrators and faculty make better decisions about the training needs of employers and the preparation of students for the changing employment markets of the 21st century.

Collin College's 2021 Employer Satisfaction Survey was administered during the COVID-19 pandemic. The survey indicated that, overall, 96 percent of employers "strongly agree" or "agree" that Collin is successfully preparing its graduates for the workplace. Analysis of longitudinal data spanning five administrations indicates that employers' satisfaction with the graduates' preparedness for the jobs for which they were hired was highest in 2021. A total of 70 businesses/organizations reported having hired Collin graduates in 2021, suggesting that employers from a fairly broad range of occupational areas showed consistently high levels of satisfaction with the performance of Collin's graduates.

The employers were asked to respond to a list of ten prompts to assess some specific aspects of Collin graduates' preparedness for the respective positions for which they were hired. An eleventh prompt was used for the overall assessment of how successfully Collin is preparing its graduates for the workforce. The prompts were assessed on a four-point scale where 1 = strongly disagree, and 4 = strongly agree; a mean score closer to four is more desirable. The statements "Collin graduates appreciate diversity in the workplace" and, "Collin graduates effectively cooperate with others" are tied in the first place with the greatest degree of agreement (3.72), followed by "Collin graduates demonstrate the ability to effectively participate in team activities" (3.69). Compared to the results of the last administration (2018), the mean scores improved for all 11 prompts in 2021. Not only did the mean scores improve, there was a statistically significant increase in means for graduates' demonstration of critical thinking skills, t(144)=2.724, p=.007) and graduates' effective participation in team activities, t(144)=2.046, p=.043). It is speculated that the significant increase could be because more committed graduates worked during the pandemic.

Like in previous administrations, multiple approaches and modalities were deployed to improve the response rates. Over time, the number of completed surveys has been slowly increasing; however, given the extent of the effort, the output is not very encouraging. The number of responses went up from 66 in 2015 to 135 in 2016, to 209 in 2017, to 166 in 2018, and 176 in 2021. We need a larger number of employers to respond so we can

have more confidence in saying that the survey results represent the general population of employers of Collin's graduates.

The top occupational areas represented by the respondents were Fire Science (9), Associates Degree (7), Dental Hygiene (7), Business Management (6), Emergency Medical Technician EMT (6), Emergency Medical Services (Paramedics) (5), Others (5), Automotive Technology/Collision Technology (4), and Nursing (4). Out of the 69 programs listed on the instrument (including the associate degree), 31 received no responses. IRO could not generate separate reports for any program because it did not receive sufficient responses from employers.

The open-ended comments were mostly suggestions and positive feedback. Regarding additional competencies during the pandemic, the employers highlighted graduates' ability to resolve technical issues in remote settings, flexibility, collaboration, and adaptability in remote environments.

In the context of national and state policies and Collin's expanding workforce programs, coupled with the fact that Collin's service area is experiencing unprecedented growth, Collin College is positioned to play a critical role in the service area by meeting the needs of the area employers. Collin's success in supporting the growing economy of its service area rests in its ability to meet the needs of employers with well-educated and trained graduates. Hence feedback from employers becomes more important than ever. To obtain employers' feedback, Collin needs the contact information of employers. The IRO intends to continue pursuing the current successful strategies and will keep exploring new initiatives to help improve the response rates.

Active engagement and support from academic administrators and faculty will continue to be critical for the success of the ESS. The associate deans and program directors not only can play a pivotal role in identifying employers of workforce program graduates, but they also can fill the irreplaceable function of contacting the employers, thus helping Collin meet its obligations for program improvement and demonstrating to the Texas Higher Education Coordinating Board (THECB) and the Southern Association of Schools and Colleges Commission on Colleges (SACSCOC) the Collin's commitment to program improvement besides meeting the needs of the growing service area economy. At the national and state levels the focus on workforce programs has increased, and Collin's strategic plan is reflective of the national and state priorities. The ability to obtain feedback on how our students are doing is becoming more crucial.

Collin needs to revisit the ESS in the context of the changing labor markets and globalization and seek information from employers about the skills they think would be

crucial or least important to their businesses. Also, collaborate with the workforce program administrators and faculty to review, revise, and add new skill sets to the ESS.

Summary Report Employer Satisfaction Survey of Workforce Education Programs Spring 2021 Administration

Introduction

Collin College's Institutional Research Office (IRO) periodically administers an Employer Satisfaction Survey (ESS) to obtain input from businesses and agencies that hire the College's workforce education program graduates. The objectives of this survey are (1) to assess employers' impression of Collin's recent workforce education program graduates and (2) to give program faculty a sense of how effectively they are preparing students to meet the current needs of employers. The insights provided by the survey help academic administrators and faculty make better decisions about the training needs of employers and the preparation of students for the changing employment markets of the 21st century.

In recent years, the increased emphasis by accrediting bodies on post-graduate outcomes (earnings, geographic movement, debt, employment by sectors, etc.) has led institutions to seek/use LMI tools (Labor Market Information) to understand the movement of their graduates in various sectors/geographies. The recent effort by the U.S. Census Bureau's Post-Secondary Outcomes (PSEO) ¹ provides comprehensive graduate outcomes data for participating institutions (US Census Bureau, 2022). The Workforce Innovation and Opportunity Act (WIOA) of 2022 (H.R.7309) bolstered vocational education and career development, leveraging partnerships and funding to equip students with the skills needed for success in diverse industries.

The LMIs provide data on where an institution's graduates go for work. No doubt, the graduation cohorts' outcome data is valuable to institutions and their programs, but employers' satisfaction with the performance of the graduates at the workplace is vital as well. However, obtaining the contact address of employers is a key impediment in seeking employers' satisfaction with the workplace performance of graduates. The employer's satisfaction becomes exceedingly important regarding 21st-century market skills. In 2017 and 2018, IRO used HEPdata² to obtain employers' contact information but they no longer offer the service. The national credit bureaus like Equifax do have employers'

¹ "The PSEO is made possible through data-sharing partnerships between universities, university systems, State Departments of Education, State Labor Market Information offices, and the U.S. Census Bureau. PSEO data are available for post-secondary institutions whose transcript data have been made available to the Census Bureau through a data-sharing agreement."

² The HEPdata started as a company with the primary purpose to help fundraisers engage donors through accurate and timely data. Later, it expanded to include EmployerFind and EmployerAlert to append up-to-date information about employers' names and their job titles using social network data.

contact information. However, cost and FERPA constraints make them formidable to use. Therefore, IRO resorts to collecting employers' contact information using different time-consuming ways.

In recent years, in the context of global competitiveness, the concern for qualified workers has grown along with the recognition of the need for soft skills in the workplace. ESS helps us understand employers' perceptions of our graduates' performance at the workplace in terms of key soft skills that are universally deemed necessary to be successful. The data generated from the ESS can serve useful input for instructional program review and help assess how effective the programs and program improvements are for the state and SACSCOC reporting.

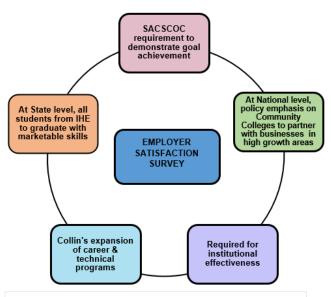


Figure 1. Employer Satisfaction Survey in the context of policy and planning.

Collin County has had massive relocation of corporations and has experienced immense growth of small and large businesses. Six of the 10 counties with the largest population gains in this decade are in Texas, and Collin County is one of them. (U.S. Census Bureau, 2019). It was one of the top counties in the U.S. for population growth last year (Williams, 2022). In this context, Collin College is uniquely positioned to play a critical role in the area by providing a pipeline of qualified workers and meeting the training needs of the area employers. Collin College has initiated many new workforce programs; its recently opened Technical Campus focuses on workforce education and offers numerous programs in career and technical fields. Collin's success in helping the area's growing economy rests on its ability to meet the needs of area employers with well-educated and trained employees. Continuing to do so greatly depends on feedback from employers about their needs and how well Collin is preparing its graduates to meet employers' needs. The ESS sheds light on employers' impressions of Collin's graduates.

The most recent Employer Satisfaction Survey was administrated in 2021; the administration started in spring and the data collection continued till the end of July. Before the administration, IRO requested the deans and associate deans of workforce

education programs to review the survey instrument to ensure that it reflects the programs in their areas. Following their input, the ESS instrument³ was revised.

The 2021 ESS began by asking the employers if they had hired any Collin graduates within the last two years (2019 and 2020). If yes, they were requested to check the program(s) from the list of Collin's workforce education programs from which they had hired the graduates in 2019 and 2020. The employers were asked to give their impressions about the performance of Collin graduates based on ten prompts related to competencies associated with various areas of workforce preparation. An eleventh prompt sought an overall assessment of how successfully Collin prepared its graduates for the workforce. These prompts embraced the THECB's core objectives for the General Education's Learning Outcomes (communication skills, critical thinking skills, empirical and quantitative skills, personal responsibility, social responsibility, and teamwork) and encompassed marketable skills like interpersonal and other applied skill areas mentioned by 60x30TX, Texas's strategic plan for higher education at the time.

The eleven prompts were rated on a four-point scale⁴ where 1= strongly disagree and 4 = strongly agree. The mean response on the four-point scale represents the arithmetic average of all scores on a given item, and the standard deviation reflects an average measure of variation from the mean. The higher the mean response, the greater the relative degree of agreement; a value closer to four is desirable. A copy of the survey appears in Appendix B.

Methodology

The survey instrument and the survey administration processes were reviewed and revised. Like the previous administration, a multi-pronged methodology was embraced to improve the response rate. This entailed deploying several survey modalities to obtain feedback from employers. The survey methodology is graphically illustrated in Figure 2 on page 7. Successful initiatives from the last three administrations were continued, some initiatives were abandoned, while some new initiatives were pursued:

A. Because of the COVID-19 pandemic, a noteworthy change in 2021 was that no paper surveys were sent to employers for whom IRO had only garnered physical addresses. Paper surveys entail a substantial investment of time and effort. Mainly, they were not

³ After consultation with the instructional deans, some majors were removed, and a number of new majors were added. Excluding the "other", the total number of majors in 2021 was 68 as opposed to 46 in 2018.

⁴ Up till 2015, a reverse 4-point scale was used where 1 = strongly agree and 4 = strongly disagree, hence lower mean scores indicated a greater degree of relative satisfaction. Starting from 2016 the scale was flipped to make it more intuitive so that higher values reflect higher satisfaction levels.

administered due to the pandemic when the public was fearful and sanitizing everything. At the same time, many workplace environments and businesses transitioned or became virtual.

- B. In 2021, an open-ended question was added to the instrument asking employers about any particular competencies their business needed from their employees during the pandemic.
- C. Like in previous years, the recent graduates were directly approached by IRO via an electronic survey, aka, the "Graduate Survey," requesting information from graduates about their employment status following their graduation and requesting the electronic and physical addresses of their employers. The graduates were informed about the importance of ESS and were assured that the ESS questions did not pertain to them directly, rather, ESS asked general questions relating to all graduates. As a preemptive measure to address any concerns of the graduates and to satisfy their curiosity in terms of what questions Collin would be asking their employers, a link to the "Employer Satisfaction Survey" was embedded into the Graduate Survey so that graduates could click on the link to visit the ESS for themselves.

In 2021, a total of 620 graduates responded to the Graduate survey, but only 86 furnished the email addresses of their employers (after accounting for the bad addresses, the valid number of employers with email addresses was reduced to 77). Nonetheless, most graduates provided the physical addresses and/or telephone numbers of their employers. In the future, IRO may consider making phone calls to those employers for whom it garners telephone numbers only.

- D. Initially, the Dean of Health Sciences volunteered to disseminate the ESS link to the associate deans and program directors, asking them to send the survey link to their advisory board members using customized letters. However, due to the poor response rate, IRO, with the approval of the Dean of Health Sciences, stepped in to directly contact all program directors requesting their engagement and support.
- E. Due to the pandemic, Collin's annual in-person job fair, hosted by Career Services, was substituted by a virtual job fair. The Career Services manager informed the registered employers about the upcoming ESS survey via email. With collaboration and support from Career Services, IRO was able to send ESS to the registered employers who participated in the virtual job fair in April 2021. Only two completed responses were received. For in-person job fairs, the completed surveys returned on the spot from the participants of the job fair resulted in a much higher response. With

continued cooperation and support from Career Services, IRO will pursue this initiative in the next administration as well because this initiative represents low-hanging fruit.

- F. The ESS was made accessible via cell phones.
- G. The IR Director-initiated databank ⁵, based on electronic and physical contact information of all employers who had ever hired any Collin graduate(s) was updated in 2021. The data redundancies were manually cleaned. Following the consolidation of all addresses from various sources and removing duplicates, the most recent addresses were retained.
- H. Unlike the previous year, IRO was not able to obtain the email addresses of employers who had hired via Collin's Cooperative Work Experience (Co-Op).
- I. IRO could no longer use the contact information from HEPdata as it stopped running its Business Append Service that pulled the employers' contact information.
- J. Insertion of ESS prompts within the Dental Hygiene Employer Satisfaction survey continued with the support of the Director of Dental Hygiene.
- K. The customization of the surveys by IRO on behalf of associate deans/directors ensured that the sender's box in the email displayed the name of the associate dean/director along with his/her designation. This was done to encourage recipients to open their emails; if recipients recognize the senders' name they are more likely to open the email and less likely to treat it as spam. This initiative involved substantial effort and time on the part of the IRO staff member who administered the surveys as it entailed having multiple surveys going out bearing the names of different associate deans/directors. In a nutshell, it involved treating each Program's survey as a separate entity.

Because of the number of personalized surveys to different groups, and the flexibility in the survey administration process, IRO could not maintain consistency in sending follow-up survey reminders. The inability to maintain consistency in follow-up reminders stems from multiple survey modalities and administration processes that were not entirely in IRO's control. Hence, follow-up reminders varied from survey to survey. No reminders

⁵ This initiative gathers all the email addresses of employers from various sources. This initiative was undertaken to mitigate the difficulty and time-consuming struggle in obtaining employers' contact information. This databank houses the data obtained from Simplicity (a job posting database used by Collin that has the names of all employers who had ever hired/or listed job postings), from past graduate surveys, and from the previous ESS surveys.

were sent in instances where the survey link was provided to the associate deans/program directors. Typically, one follow-up reminder was sent in instances where IRO administered the ESS.

In 2021, a total of 176 responses were obtained from 7,565 employers, including 5,517 employers' addresses garnered from the IRO databank. Excluding 1,929 bad addresses, there was a valid response rate of 3%. Thirty-two out of the total completed surveys were employers from the IRO's databank. The remaining 144 completed surveys were from all other ESS administrations. The number of completed surveys in 2021 (176) was slightly higher than in 2018 (166 responses). Historically, ESS has not had good response rates; in 2018, there were 166 completed surveys, as opposed to 209 for 2017, 151 for 2016, 62 for 2015, and 135 for 2013. The reference period for the hiring graduates for the 2021 administration was "within the last two years, whereas it was "within the last year" for 2018, 2017, and 2016 administrations. The 2015 and 2013 surveys asked if employers had hired within the last two and three years respectively⁶. Overall, one can say that the outcomes have improved slightly.

A difference of means test was undertaken to see if there were any statistically significant differences in the mean scores for the 11 prompts between 2021 and 2018.

⁶ The variations in the reference period are because of the gaps in survey administrations. No survey was administered in 2019 and 2020. Therefore the 2021 ESS refers to two years.

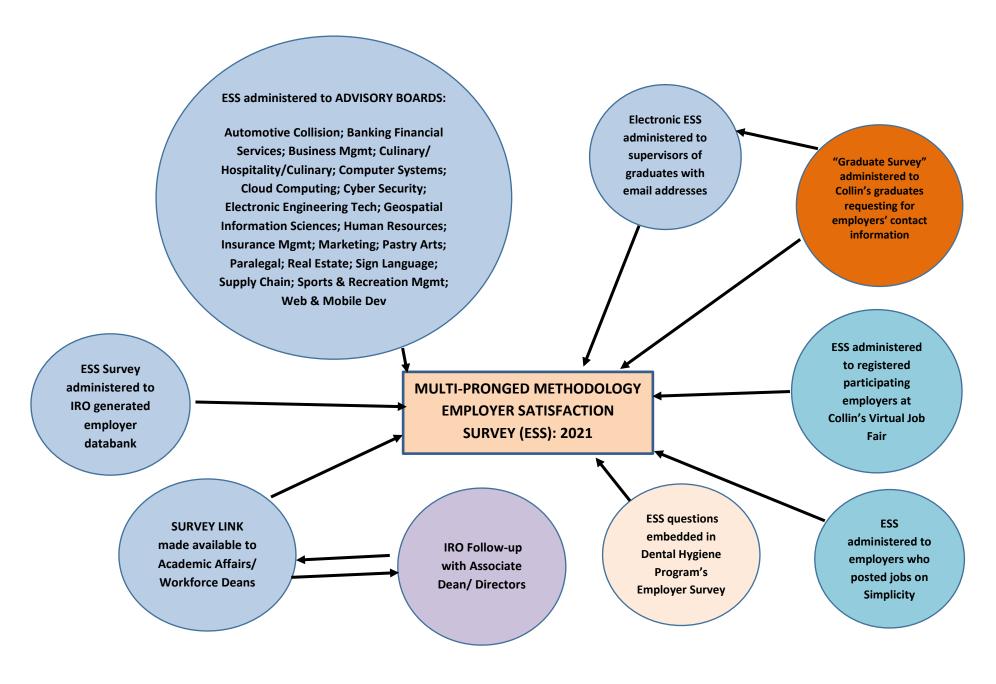


Figure 2. Multi-pronged Methodology of Employers' Satisfaction Survey (ESS): 2021 Administration

Results

In 2021, 40 percent of the responding employers (176) reported having employed Collin graduates in the last two years (2019, 2020) which is 3 percentage points lower than reported for the 2018 administration (Figure 3). The number and percentage of

employers who sent their employees for training/upgrading their skills declined to 7 percent in 2021 from 18 percent in 2018. In terms of numbers, almost the same number of employers had hired Collin graduates during the two administrations (70 vs.71). However. the number employers sending their employees for training dropped by over half between the administrations (from 29 in 2018 to 12 in 2021) This drop was most likely because 2020 was atypical due to the effects of the COVID-19 pandemic whereby many of employees started working remotely and the College was not open for the initial part of 2020 as it had switched to remote learning.

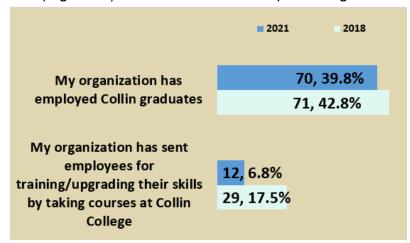


Figure 3. Has your organization employed any Collin College graduates within the last year?
2021 versus 2018 administration

Notes.

- 1. The totals do not add to 176 and 166, respectively, for the 2021 and 2018 administrations because many respondents selected more than one response choice.
- In the 2021 administration, employers were questioned in reference to two years (2019 & 2020), whereas in the 2018 survey administration, the reference was one year (2017).
- 3. The percentages in the bars are computed out of the totals for 2021(176) and 2018 (166) administrations.

The 70 employers who had hired Collin graduates were asked about the approximate number of graduates they had hired in the last two years. Out of the 70, 59 employers provided information about the number of graduates they had hired. Out of the 70 employers who had hired, 25 (42 percent) hired one, and 17 (29 percent) hired two graduates. One employer reported hiring 50 graduates. (Appendix A, Table A3).

The employers were asked to respond to the ten prompts for assessing specific aspects of Collin graduates' preparedness for the positions for which they were hired. An eleventh prompt is an overall assessment of how successfully Collin is preparing its graduates for the workforce. See Appendix B for a copy of the questionnaire. As mentioned before, the prompts were assessed on a four-point scale where 1 = strongly disagree and 4 = strongly agree, and a mean score closer to four is more desirable. The prompts and the employers' mean responses are provided in Figure 4.

Employers were largely satisfied with the performance of Collin graduates in all areas, as evidenced by mean scores closer to 4 on the four-point scale for all prompts. The statements "Collin graduates appreciate diversity in the workplace" and "Collin graduates effectively cooperate with others" are tied in the first place with the highest degree of agreement (3.72), followed by "Collin graduates demonstrate the ability to effectively participate in team activities" (3.69). Two prompts tied in third place were "Collin graduates demonstrate ability to understand written information associated with the positions for which they are hired" and "Collin graduates demonstrate computer skills appropriate for entry into the positions for which they are hired" (3.66). "Overall, Collin is successfully preparing its graduates for the workplace (mean score of 3.63).

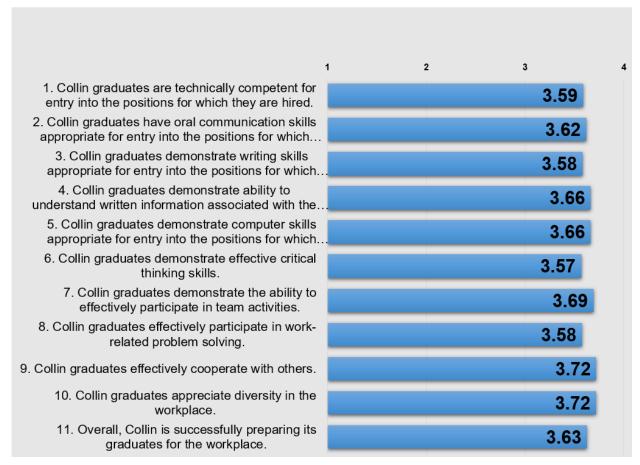


Figure 4. Mean scores on a four-point scale for 11 prompts about graduates' preparation for positions for which they were hired.

Source: Employer Satisfaction Survey 2021.

There was an improvement in employers' impressions of Collin graduates as employees. Compared to the results of the 2018 survey, mean scores improved for all 11 prompts (Appendix Table A5). The most improvement occurred in Collin graduates' demonstration of critical thinking skills, which had the highest mean difference compared to 2018 (0.32).

This was followed by demonstrated effective participation in team activities and graduates' effective participation in work-related problem solving that were tied in second place with a mean difference of 0.23. A difference of means test indicated that there was a statistically significant difference in means between 2021 and 2018 for graduates' demonstration of critical thinking skills, t (144) = 2.724, p=.007), and graduates' effective participation in team activities, t (144) = 2.046, p=.043).

Keep in mind a caveat when comparing results from different administrations of ESS because each year different employers/organizations respond, so the mean increase or decrease could be a reflection of the type of employers/organizations responding who may value a particular work-related competency/skill more or less depending upon the nature of their work. Overall, the employers perceived that Collin is preparing its students well (3.63); the mean score improved from 3.51 in 2016 to 3.54 in 2017 to 3.51in 2018 to 3.63 in 2021. The mean is inching closer to "4" ("strongly agree") on the scale; the higher the value on the scale, the better the impression of Collin graduates as employees.

Analysis of longitudinal indicates data that employers' impressions over the years are pretty stable (Figure 5); around 95 percent "strongly "agree" that agree" or Collin is successfully preparing its graduates for the workplace except for the 2015 administration. The lower percentage (88%) in 2015 could be attributed to two things: (1) the 2015 survey was administered only to the members of the advisory boards who likely held higher standards of performance and/or (2) the fact that the number of

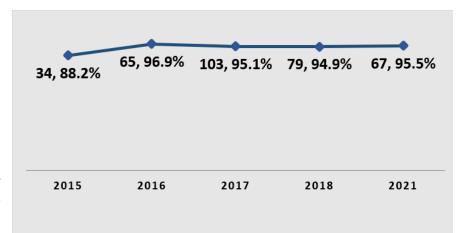


Figure 5. Overall, Collin is Successful in Preparing Collin Graduates for the Workplace.

Notes.

- 1. No survey was administered in 2019 & 2020.
- 2. The 2015 survey was administered to only the Programs' Advisory Board members.
- 3. The numbers represent the total number of valid respondents who answered the prompt, "Overall, Collin is Successfully Preparing Its Graduates for the Workplace." Respondents who selected the response choices, "Strongly Agree" and "Agree" on the four-point scale are represented by the percentages following the comma.

advisory board members who had hired was much smaller.

The top occupational areas from which employers hired were Fire Science (9), Associates Degree (7), Dental Hygiene (7), Business Management (6), Emergency Medical Technician EMT (6), Emergency Medical Services (Paramedics) (5), Others (5), Automotive Technology/Collision Technology (4), and Nursing (4). Out of the 69 programs listed on the instrument (including the Associate's degree), 30 received no responses. For details, see Appendix Table A1.

Despite concerted efforts, the number of responses from any area was insufficient to allow data to be meaningfully broken out across the College's programs listed on the survey. Only in 2017, there were enough responses for Fire Science and Business Management to provide data for these two areas.

A list of 70 companies/organizations that had hired Collin graduates during the reference period and who had voluntarily identified themselves, along with the list of 12 companies/organizations that had sent their employees for training, is presented in Table 1 below.

Table 1. Businesses/Agencies that...

Palmer Law Group, P.C.
Pat Lobb Toyota of McKinney
PNP Hospitality Inc /DB Holiday Inn Richardson
Quality Family Health Care Clinics PLLC
Richardson ISD xPlore After School Programs
Stolk Labs, Inc.
Stonebriar Medical Associates PA
TEKsystems
Texas Oncology
Texas Redbud Dental
The Heritage Table
Tomes Collision Center
Verizon
Weaver Consultants Group
Willowbend Corporation
Wylie Fire Rescue
No name provided (22)
Total = 70
(b) sent employers for training in 2019 & 2020
Addison Fire Department
Apple Creek Preschool
Classic BMW
Coppell Fire Department
Dental Consultant
GTA Restoration Group Inc.
NBCF
The Wilkins Group, Inc.
US Medical IT
Wylie Fire Rescue
No Name provided (2)
Total = 12

Open-Ended Comments

Two open-ended questions were asked. The first provided employers an opportunity to comment or provide suggestions that might help Collin to prepare its students more effectively. Thirty-one comments obtained in response to this question are summarized in Table 2a in descending order of tally. The largest number of responses were suggestions (n=13) (bolded); 12 were positive comments, two comments related to improvements (blue font); and one comment was negative (red font). Overall, 42 percent of the comments were suggestions, another 39 percent were positive, and 10 percent were lumped as "other." Detailed verbatim comments of employers are presented in Table 2b and follow the same font style and color as in Table 2a.

Table 2a: Summary of Open-Ended Comments

Comments	N	%
Suggestions	13	41.7
Positive responses	12	38.7
Other	3	9.7
Needs Improvement	2	6.7
Negative	1	3.2
Total comments	31	100.0

During COVID, employers had to adapt to the new digital remote climate and adapt to the needs of a new "normal," hence the second open-ended question asked the employers, "Due to COVID-19, what additional competencies did you seek from employees, so they are able to work more effectively in your organization." A total of 27 comments were received which are presented verbatim in Table 3.

Table 2b. Open-Ended Comments in Response to the Following Prompt: "Please provide comments or suggestions that might help Collin College more effectively prepare students to work in your organization." (Employers' Verbatim Comments)

Comments

ADN program prepares students to work in a variety of settings.

Basic writing

Both our hires have done very well

Collin College can corporates with graduated students to find if there is any internship opportunity which help student have actual experience before get full time work.

Collin College fire recruits that I have hired are well trained and competent in all aspects of the job.

continue building teamwork skills, resiliency skills, and the ability to welcome constructive feedback and put it into practice

Expand work-based learning opportunities

Incorporate some patience within each roll and longevity in an organization. Can't rush progress and job hopping is frowned upon.

Increase the size of the dental hygiene class (I know this is in the works) to address the workforce shortage.

interested in CADD and GIS students. Introducing them to more civil engineering and land surveying tasks would be very beneficial. Feel free to contact me regarding internships, advisory committees, volunteering, real world work examples, etc. Jeff Whanger, jwhanger@wcgrp.com. 713-501-5735

It would be wonderful to be able to connect directly with students that are taking classes in the area of profession that will take them into my field. Possibly through a job fair or a job posting.

More Fire Academy Classes

More preparation on soft/human skills needed. Better communication, both written and verbal - especially verbal.

Most business today rely on their network to work in order for their business and workforce to work. Similar to other engineering disciplines, entering the workforce with not experience it is very risky for the hiring manager as changes to the infrastructure can cause critical even catastrophic implications to the business being managed. Certifications or challenging situations provide valuable information regarding how new hires will navigate those situations. Most graduates (not just from Collin) come with no certifications.

My paralegal had to be trained to do all the specific tasks required at a criminal defense / personal injury office. The specific tasks learned in school did not seem to match real, office practice. However, I was extremely impressed with her performance, and when she left I hired another Collin graduate with no experience, based on my confidence in Collin College from my first hire.

N/A

None that come to mind.

Nursing assistants do not have basic medical terminology and therefore have a very big learning curve since they can't communicate with medical professionals. This affects their job from the first day since they don't understand how to read medications orders or understand how to talk with patients. Basic writing skills should be mandatory because new grads now come out of school writing how they text rather than writing professionally.

Table 2b. Continued

Comments

Our organization (103 members) currently have 17 employees which are Collin graduates. Many of these graduates have promoted to supervisor positions. If CC wasn't doing well with preparing their graduates our number of CC graduates employed with us would be less.

Continuing education courses are needed.

Overall very well prepared employees from your programs.

Reach out to firms like mine to provide a mentor / internship or co op program where we can have students work alternating semesters with my firm.

Setting up the realistic expectations of starting a position at base level without experience.

Since we are a preschool, it is important that employees be trained in behavioral management of the preschool class. I have found that this area of expertise is most lacking in many of our employees, not only Collin College students. Managing behavior in kind, consistent, fair and developmentally appropriate and highly structured ways facilitates teaching. Without appropriate behavioral management skills, it is impossible to be an outstanding teacher.

Students should be guided thru collin college to different avenues which are available for them to explore and apply

The Collin Fire Academy does a great job at preparing students for entering the fire service.

The employees hired are all graduates from the Collin Fire Academy. I have found that they all have a well rounded skills set.

The polysomnography associates program has provided several great employees the past few years. I will definitely hire Collin College grads again.

The work ethic, aptitude and general understanding of how a restaurant kitchen works are the most important aspects of the employees we hire. I'm not sure how Collin could improve these aspects, as they have all been good in all these categories. There are things learned in our kitchen specifically that would bog down a college level course, such as the intricacies of cured meats & fermentation, equilibrium brines and using the metric system as the standard of measurements. But those are all fairly kitchen-specific. Overall, they've been really great at picking up these things, as well.

We are always Open to hire more Collin under graduate & recent gradute for challenging and rewarding positions at our hotel

Wylie Fire works hard at staying involved within the community. One way is by doing fire safety talks and birthday events for citizens. I'm aware that their is a PR aspect to the class, but public speaking specific to younger ages would prepare them better for engaging in the community. Perhaps one way to do this is by inviting local preschools, or a visit to the local elementary school and conducting a show-and-tell, would help them know how to adjust their approach with specific audiences.

Overall clinically competent grads, slight advantage for grads with dental background. Advantage for grad with caring and outgoing personality, unfortunately this is not trainable, a very important trait for dentistry due to lack of communication leads to patients associate that with "not" caring...

Note. The suggestions are in black font (bolded); positive comments are in black font (not bolded), comments related to improvements are in blue font; and negative comments are in red font.

Table 3. Open-Ended Comments in Response to the Following Prompt: "Due to COVID-19, what additional competencies did you seek from employees so they are able to work more effectively in your organization." (Employers' Verbatim Comments)

Comments

No Response

ability to set up and resolve technical issues related to working from home. Dealing with troubleshoot their own router issues, software issues, etc.

Adherence to COVID safety precautions inside and outside of the workplace for the safety of our staff and patients.

Computer skills

cyber hygiene

Dedication, commitment, and optimism - belief that they can succeed and accomplish great things if they persevere.

Flexibility in collaboration and working with others in a remote environment.

implementing task deadlines to help new grads understand how long the work should take and when the team needs it by.

Introducing students to formal virtual video meetings

N/A

no

No additional competencies were required. Only an adjustment to our operations, specifically towards EMS.

None due to COVID 19 specifically.

Nothing new -- infection control already emphasized and implemented pre-pandemic.

Our Collin College graduate was an "operational" employee and had to work during the issues of COVID. The pandemic didn't really influence his working environment.

Positive attitude

Problem solving, flexibility, adaptability, willingness to learn quickly.

Social emotional

The ability to adapt to a changing work environment.

The adaptive & time-management skills necessary to be able to work from home.

These competencies were most needed during the Pandemic: the ability to articulate clearly through a mask. 2.) The ability to connect to children despite all of the restrictions that were imposed at the height of the Pandemic. The ability to be extremely flexible in challenging situations 3. The ability to sort out facts from fiction 4. The ability to follow rules and regulations 5. The willingness to take on different shifts to compensate for absences due to those that were quarantined

Time and project management.

Wash hands, wore mask, practice social distancing, schedule appointment instead of walk-ins.

We work from home more now so being self starters, organized and reliable helps a lot.

We're a kitchen - the requirements didn't change much :)

Challenges

- The biggest challenge and impediment to the survey is the inability to find the contact information of employers. Therefore, a fundamental focus should be to continue to identify ways to obtain the contact information of employers.
- Low response rate to the survey is another key challenge. Re-focus on the efforts to have more employers respond to the survey.
- Reduce the number of incorrect email addresses. In 2021, out of 8,126 graduates' who were sent the Graduate Survey to obtain information about their employers, there were 344 bad email addresses. In 2018, out of 3,225 email addresses, 131 failed. Likewise, in 2017 out of 2,895 email addresses 165 failed. Effort needs to be made to reduce the number of bad email addresses. Collin needs to find a way to have graduates confirm/provide their personal email addresses before their graduation so that graduates can be contacted with minimum email bounces.
- Promote the importance of ESS. The graduates who were contacted via "Graduate Survey" and the employers who were directly contacted were informed about the importance of ESS in the context of national and State policies and Collin's strategic priorities.
- Embracing a multi-pronged methodology with multiple survey modalities of ESS could lead to disparities in the administration process. IRO found it challenging to maintain consistency in sending follow-up reminders, which varied between survey modalities and administrations, e.g., no follow-up reminders were sent in cases where the survey URL was provided to the Dean to disseminate it to associate deans/program directors. In instances where IRO administered the surveys, typically, one follow-up reminder was sent. Hence the inability to maintain consistency over time in the administration of surveys could impact comparisons between years because of differences in methodology.
- IRO could not keep track of the number of advisory board members in instances when the survey link was provided to the associate deans/program directors by the Dean.
- Because of the customization of ESS, it becomes cumbersome for IRO to maintain several active surveys at various stages of the administration, monitor their progress, manage follow-up reminders, and download each survey as a separate entity.
- The Nursing Program did not administer its Employer Satisfaction survey.

- In 2021, the Dean of the Health Sciences forwarded the ESS survey link to the program directors to administer to their advisory board members, hence, for the first time, IRO could not keep track of the number of surveys sent and the number of responses received from most of the advisory boards and was not able to track the response rates from different areas.
- The IR Director worked with Collin's Career Services to obtain the email addresses of employers that were registered for the virtual job fair.

Future Efforts to Identify Employers and Improve Response Rates

- Because of Collin service area's rapid growth and fast-changing market, it is necessary to review the ESS instrument in light of the market's changing needs and consider adding questions that, for example, ask employers, "What future competencies do they see in the type of jobs they offer", "What skills they would like our graduates to have in the coming three to five years" and, "What skills they would like for remote settings." Any revisions to the instrument are to be made in consultation with the deans, associate deans, and directors of the workforce programs.
- Emphasize the significance of ESS to the (1) deans/associate deans/directors, (2) to the employers, and (3) Collin graduates in the context of the changing market needs and Collin's strategic focus and the State of Texas' strategic plan. Continue to promote awareness amongst administrators and faculty of the workforce programs about the significance of employer feedback. Encourage faculty to maintain contact with graduates after they leave Collin as faculty can be instrumental in maintaining currency to the graduates' information.
- Explore the possibility of working with Student Services, which has acquired text
 messaging software, Signal Vine, to send texts to students' cell phones seeking their
 current emails and employers' contact information.
- Explore how social media could be harnessed to obtain graduates' current personal email addresses and their employers' contact information.
- Besides the Dental Hygiene and Nursing Programs, explore the possibility of adding questions from ESS to other workforce programs that undertake satisfaction surveys to meet their accreditor's needs. When feasible, try to obtain the list of employers from those programs. This is a win-win collaboration as the program directors get data on the soft skills of their graduates, and the IRO gets feedback from employers on the ESS items embedded in the survey. A bonus of this initiative is that instead of

dispensing two separate surveys to the same employers, only one survey is administered. This saves time and effort in survey administration besides reducing survey fatigue for employers.

- Explore the possibility of Involving Student Development to include information about ESS in their information sessions.
- Continue to develop and maintain an updated IRO-generated databank of employers. It is encouraging that out of the total 176 responses to the 2021 ESS, 32 (18%) were garnered from the IRO-generated databank.
- Because the traditional methods of obtaining employers' information yield inconsistent and low outcomes, IRO should continue to explore less traditional methods. Since HEPdata no longer provides employers' contact information IRO should explore other options for obtaining employers' contact information.
- In addition, IRO should revisit the various LMIs to see if things have changed.
 - Reach out again to EMSI's Alumni Insight which provides alumni information based on publicly available social and professional profiles and Career Builders Resume Database to see if things have changed. In the past, it was very costly to have the whole package and the bare minimum package had data download limitations which made it very inefficient.
 - Given the effort, it takes to administer multiple modalities of ESS, try to explore the Outcomes Survey by GradLeaders¹ to track career outcomes for recent graduates. In the past, this option was not pursued since IRO's Graduate Survey gathers information from the graduates about their employment status and their employers' contact information for the last year. However, with more emphasis on the graduates' outcomes and budget permitting, it can be explored as this survey provides insights into how graduates fare after commencement at three, six, and 12 months after finishing their studies. They require the institution to provide the personal email addresses of its graduates and they administer the survey.
 - In the past, IRO also explored Equifax which leverages its existing job verification system, the Work Number, with data from over 5,700 employers to provide a dynamic picture of graduates over time by program and degree type. Equifax's Graduates' Outcomes analysis provides information about where the institution's graduates reside post-graduation, their income, and which

_

¹ This survey is being utilized by 120 schools nationwide.

industries employ the institutions' graduates. However, to obtain the employers' contact information, the required fee per transaction was pretty steep besides a yearly subscription which made it very expensive. IRO plans to reach out to Equifax before the next administration of ESS to negotiate prices and look into the possibility of doing some pilot at a discounted price to obtain the employers' contact information.

Explore the US Census Bureau's Post-Secondary Outcomes (PSEO) data, which provides key employer outcomes data from the earnings of the partnering institutions' graduates by degree level, degree major, and post-secondary institutions. US Census Bureau: https://lehd.ces.census.gov/data/pseo experimental.html

Appendix A
Summary Tables

Table A1: List of Programs by Response (in Descending Order of Number of Response)

Programs from which employers hired	Count	%	Programs from which employers did not hire	Count	%
Fire Science	9	9%	Biomedical Equipment Technology	0	0%
Associates Degree (none of the above majors)	7	7%	Biotechnology	0	0%
Dental Hygiene	7	7%	Central Sterile Processing	0	0%
Business Management	6	6%	Commercial Music	0	0%
Emergency Medical Technician (EMT)	6	6%	Commercial Photography	0	0%
Emergency Medical Services (Paramedics)	5	5%	Computer Science	0	0%
Other	5	5%	Computer Support System	0	0%
Automotive Technology/Collision Technology	4	4%	Database Development/Programming	0	0%
Nursing (RN)	4	4%	EKG Technician	0	0%
Computer-Aided Drafting & Design	3	3%	Electronic Engineering Technology	0	0%
Geospatial Information Science	3	3%	Health Information Management (incl. billing	0	0%
Paralegal/Legal Assistant	3	3%	& coding) Heating, Ventilation & Air Conditioning	0	0%
Child Development	2	2%	(HVAC) Industrial Automation	0	0%
Computer Information Systems	2	2%	Insurance Management	0	0%
Computer Networking Systems (including Convergence Technology, Cisco Certification and Microsoft Certification, Wireless)	2	2%	Interior Design	0	0%
Culinary Arts	2	2%	Law Enforcement	0	0%
Hotel/Restaurant Management	2	2%	Meetings & Event Management	0	0%
Nurse Aide/Assistant (Certified)	2	2%	Nursing LVN	0	0%
Office Systems Support/Business Office Support System	2	2%	Nursing - Bachelors of Science	0	0%
Real Estate	2	2%	Sign Language Interpreter	0	0%
Activity Care Professional	1	1%	Software Design	0	0%
Agriculture	1	1%	Sports & Recreation Management	0	0%
Animation/Game Art	1	1%	Supply Chain Management	0	0%
Audio Engineering	1	1%	Surgical Technology	0	0%
Construction Management/Construction Technology (incl. Carpentry, Electrical, Plumbing, Safety)	1	1%	Surgical Assisting	0	0%
Cybersecurity	1	1%	Video Production	0	0%
Cybersecurity-Bachelors of Applied Technology	1	1%	Veterinary Assistant	0	0%
Diagnostic Medical Sonography	1	1%	Web Administration	0	0%
Engineering Technology	1	1%	Web Developer	0	0%
Graphic Design/Communication Design	1	1%	Web & Mobile Development/E-Business Development	0	0%
Human Resource Management	1	1%	Total	30	100%
Marketing	1	1%			
Pastry Arts	1	1%			
Patient Care Technician (PCT)	1	1%			
Phlebotomy Technician	1	1%			
Polysomnography (Sleep Technology)	1	1%			
Respiratory Care	1	1%			
Telecommunications	1	1%			
Welding	1	1%			
Total	97	100%			

Collin IRO na; 5/29/2022; Page 22 of 31

Table A2. Has Your Organization Employed any Collin College Graduates Within the Last Year Two Years (2019 & 2020)?

	Count	%
My organization has employed Collin graduates	70	33.0%
My organization has sent employees for training/upgrading their skills by taking courses at Collin College	12	5.7%
My organization has not employed any Collin graduates	37	17.5%
My organization has NOT sent employees for training/upgrading their skills by taking courses at Collin College	93	43.9%
Total*	212	100.0%

^{*} Does not add to the number of employers (176) because some respondents selected multiple response choices.

Table A3. How Many Collin Graduates Have You Employed in the Last Two Years (2019 & 2020)?

	Frequency	%
1 graduate	25	42%
2 graduates	17	29%
3-5 graduates	10	17%
6-10 graduates	6	10%
50 graduates	1	2%
Total	59	100%

Note. Only those employers who had hired Collin graduates were asked the above question. The table does not include 117 non-responses.

Table A4. Overall, Collin is Successfully Preparing Its Graduates for the Workplace

	Frequency	Percent	Valid Percent	Cumulative Percent
1= Strongly Disagree	2	1.1	3.0	3.0
2	1	0.6	1.5	4.5
3	17	9.7	25.4	29.9
4 = Strongly Agree	47	26.7	70.1	100.0
Total	67	38.1	100.0	
No response	109	61.9		
Grand Total	176	100.0		

Aggregating the results of the response choices "Agree" and "Strongly Agree: (highlighted in yellow) indicates that 95. 5 percent of the employers had the impression that Collin is successfully preparing its graduates for the workplace.

Table A5. Comparison of 2021 and 2018 Employer Satisfaction Survey Results (Mean based on a four-point scale where 1= strongly disagree; 4 = strongly agree)

	2021	Administ	ration	20′	18 Admir	istration	
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	Mean Difference
Collin graduates are technically competent for entry into the positions for which they are hired.	68	3.59	0.738	78	3.49	0.619	0.10
Collin graduates have oral communication skills appropriate for entry into the positions for which they are hired.	68	3.62	0.713	78	3.44	0.676	0.18
Collin graduates demonstrate writing skills appropriate for entry into the positions for which they are hired.	67	3.58	0.655	77	3.39	0.691	0.19
4. Collin graduates demonstrate ability to understand written information associated with the positions for which they are hired.	68	3.66	0.614	79	3.51	0.596	0.15
Collin graduates demonstrate computer skills appropriate for entry into the positions for which they are hired.	68	3.66	0.637	76	3.57	0.66	0.09
6. Collin graduates demonstrate effective critical thinking skills.	67	3.57	0.679	79	3.25	0.707	0.32*
7. Collin graduates demonstrate the ability to effectively participate in team activities.8. Collin graduates effectively participate in work-related problem	68	3.69	0.675	78	3.46	0.678	0.23*
solving.	66	3.58	0.681	78	3.35	0.757	0.23
9. Collin graduates effectively cooperate with others.	68	3.72	0.569	79	3.59	0.567	0.13
10. Collin graduates appreciate diversity in the workplace. 11. Overall, Collin is successfully preparing its graduates for the	67	3.72	0.572	77	3.61	0.566	0.11
workplace.	67	3.63	0.671	79	3.51	0.677	0.12

Source: Employer Satisfaction Survey 2021 and 2018.

The green fill indicates that the mean score was higher in 2021 compared to 2018. The means were higher for all 11 prompts in 2021.

^{*} An asterisk indicates that there was a statistically significant difference in means between 2021 and 2018 for graduates' demonstration of critical thinking skills, t(144)=2.724, p=.007), and effective participation in team activities, t(144)=2.046, p=.043).

Appendix B

Employer Satisfaction Survey Questionnaire

Questionnaire



Employers' Satisfaction Survey

Employers' feedback becomes critical in the context of increasing emphasis on workers' readiness for the labor market at the national and state levels. Collin College continues to expand its career and technical programs in alignment with labor market needs. Hence, as an employer of Collin's graduates, your opinion is very important to us. The following survey will take no more than five minutes of your time. Your feedback will help us do a better job of preparing our students to meet your needs.

Has your organization employed any Collin College graduates within the last two years (2019 & 2020)? (Please check all that apply)
My organization has employed Collin graduates
My organization has NOT employed any Collin graduates
My organization has sent employees for training/upgrading their skills by taking courses at Collin College
My organization has NOT sent employees for training/upgrading their skills by taking courses at Collin College
□ How many Collin graduates did you employ within the last two years (2019 & 2020)?

Your organization employed Collin graduate(s) from which of the following majors in the last two years (2019 & 2020). (Please check all that apply) Office Systems Support/Business Office Activity Care Professional Diagnostic Medical Sonography Support System Agriculture **EKG Technician** Pastry Arts Animation/Game Art Electronic Engineering Technology Paralegal/Legal Assistant Audio Engineering **Engineering Technology** Patient Care Technician (PCT) Automotive Technology/Collision **Emergency Medical Services** Phlebotomy Technician Technology Emergency Medical Technician (EMT) Biomedical Equipment Technology Polysomnography (Sleep Technology) Fire Science

	Biotechnology	=	The Science		Real Estate
	Business Management	\Box	Graphic Design/Communication Design		Respiratory Care
	Central Sterile Processing		Geospatial Information Science		Sign Language Interpreter
	Child Development		Health Information Management (incl. billing & coding)		Software Design
	Commercial Music		Heating, Ventilation & Air Conditioning (HVAC)		Sports & Recreation Management
	Commercial Photography		Hotel/Restaurant Management		Supply Chain Management
	Computer-Aided Drafting & Design		Human Resource Management		Surgical Technology
	Computer Information Systems		Industrial Automation		Surgical Assisting
	Computer Networking Systems (including Convergence Technology, Cisco Certification and Microsoft		Insurance Management		Telecommunications
	Certification, Wireless) Computer Science		Interior Design		Video Production
$\tilde{\Box}$	Computer Support System		Law Enforcement		Veterinary Assistant
	Construction Management/Construction		Marketing		Web Administration
	Technology (incl. Carpentry, Electrical, Plumbing, Safety)		Meetings & Event Management		Web Developer
	Culinary Arts Cybersecurity		Nurse Aide/Assistant (Certified)		Web & Mobile Development/E-Business Development
	Cybersecurity Cybersecurity-Bachelors of Applied		Nursing (RN)		Welding
	Technology		Nursing LVN		Associates Degree (none of the above
	Database Development/Programming		Nursing - Bachelors of Science	$\overline{}$	majors) Other
	Dental Hygiene				Outei
Р	lease specify "Other"				

Please rate your general impressions of Collin graduates as employees.

	1= Strongly Disagree	2	3	4 = Strongly Agree
Collin graduates are technically competent for entry into the positions for which they are hired.	\circ	\circ	\circ	\circ
Collin graduates have oral communication skills appropriate for entry into the positions for which they are hired.	\circ	\circ	\circ	0
Collin graduates demonstrate writing skills appropriate for entry into the positions for which they are hired.	\circ	\circ	\circ	\circ
Collin graduates demonstrate ability to understand written information associated with the positions for which they are hired.	\circ	\circ	\circ	0
Collin graduates demonstrate computer skills appropriate for entry into the positions for which they are hired.	\circ	\circ	\circ	\circ
Collin graduates demonstrate effective critical thinking skills.				
Collin graduates demonstrate the ability to effectively participate in team activities.	\circ	\circ	\circ	\circ
Collin graduates effectively participate in work-related problem solving.	\circ		0	
Collin graduates effectively cooperate with others.	\circ	\circ	\circ	\bigcirc
Collin graduates appreciate diversity in the workplace.	\circ		0	
Overall, Collin is successfully preparing its graduates for the workplace.	\circ	\circ	\circ	\circ

	to work in your organization.
Due to Co more effe	OVID-19, what additional competencies did you seek from employees so they are able to work ectively in your organization.
Please inc	dicate:
Yo	our Name:
Or	rganization's Name:
Ac	ddress:
En	mail Address:
	ork Phone:

If you are ready, please click on the red submit button to send your response.

Thank you for taking the time to complete this survey.

If you have any problems sending your response or if you have any questions about the survey please contact nahmad@collin.edu



References:

Aguayo, Gary J, and Joycelyn Milner September 23, 2021, AIR (Association of Institutional Research), "Data Sources for Post-Graduation Outcomes." Retrieved on June 22, 2022. https://www.airweb.org/article/2021/09/23/data-sources-for-post-graduation-outcomes

Collin College (n.d). 2020 Vision. Collin College Strategic Plan 2016-2020. Available: https://www.collin.edu/aboutus/pdfs/201610StrategicPlanVision2020.pdf Retrieved on 1/29/2018.

Congress.Gov H. Rept. 117-321 - WORKFORCE INNOVATION AND OPPORTUNITY ACT OF 2022 H. Rept. 117-321 - WORKFORCE INNOVATION AND OPPORTUNITY ACT OF 2022 | Congress.gov | Library of Congress

Johnson, Steven Ross, April 5, 2022, U.S. News Online: "These Are the 10 Fastest-Growing Counties in the U.S." Available: https://www.usnews.com/news/healthiest-communities/slideshows/fastest-growing-counties-in-america Retrieved on 5/19/2022.

US Census Bureau (March 26, 2020). "Most of the Counties with the Largest Population Gains Since 2010 are in Texas." Release Number CB20-53. [Online]. Available: https://www.census.gov/newsroom/press-releases/2020/pop-estimates-county-metro.html Retrieved on 5/19/2022.

US Census Bureau: <u>Post-Secondary Employment Outcomes (PSEO) (census.gov)</u> <u>https://lehd.ces.census.gov/data/pseo_experimental.html</u>.
Retrieved on June 21, 2022.

Williams, Michael. Dallas Morning, News March 24, 2022 "Collin, Denton among U.S. counties with most population growth in 2021, census data shows." https://www.dallasnews.com/news/texas/2022/03/24/collin-denton-among-us-counties-with-most-population-growth-in-2021/ Retrieved on 5/19/2022.