Enhancing Student Success Through Department-Level Networking Event

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Abstract

Providing opportunities for students to engage with industry creates pathways to internships, scholarships, and career opportunities while strengthening students' professional, technical, and communication skills. By taking advantage of strong partnerships with employers and alumni, an engineering department launched, in Spring 2023, an annual department-level undergraduate Networking Event. This paper examines the correlation between this event and student success, focusing on metrics including GPA, scholarship attainment, participation in summer internships, average starting salaries, and engagement as alumni after graduation. Over three years, students who attended the event had an average GPA of 3.64, which is higher than the average GPA of non-attendees during the same periods. Scholarship attainment among attendees increased from 39.06% in 2022–2023 to 47.06% in 2023–2024, with attendees comprising 62.5% of department external scholarship recipients in 2023 and 50% in 2024. The participation in summer internships by the attendees increased from 79.49% in AY 2022-2023 to 92.19% in AY 2023-2024 and 94.12% in AY 2024-2025, including numerous placements with companies represented at the event. Since starting this event, the starting salaries of the graduates have increased steadily, and the attendees have earned higher salaries. In AY 2023-2024, the attendees earned an average salary of $80,769, exceeding the departmental average of $77,400. Employer and alumni participation expanded each year, with industry attendees growing from 53 in AY 2022-2023 representing 32 companies to 69 in 2023-2024 representing 44 companies and 80 in AY 2024-2025 representing 59 companies. In addition to providing opportunities for internships, scholarships, and careers, many industry attendees engaged more closely with students in the department by serving as senior design industry sponsors, delivering professional development seminars, and hosting career and internship information sessions. This data suggests that structured networking opportunities enhance student success while cultivating a strong network of alumni and employers who invest in the program and provide valuable industry engagement. Department-level networking events can serve as a tool to support academic performance, advance career readiness, and build long-term professional networks for both students and the academic department.

Background

Industry engagement has become an increasingly important component of undergraduate engineering education as programs seek to prepare students for professional practice. Beyond technical competence, engineering graduates are expected to demonstrate communication skills, teamwork, adaptability, and an understanding of professional norms and workplace expectations. Partnerships between academic programs and industry provide students with exposure to real-world engineering contexts, enhance career awareness, and support the development of competencies necessary for a successful transition from education to employment [1].

Networking plays a central role in translating industry engagement into meaningful student outcomes. Through interactions with employers and practicing engineers, students gain access to information about career pathways, workplace cultures, and professional expectations that are often unavailable through coursework alone. These interactions contribute to professional identity formation by helping students begin to see themselves as future engineers and by reinforcing the relevance of their academic preparation to professional practice [2]. In addition, networking supports career readiness by facilitating access to internships, mentoring relationships, and employment opportunities, while also building students' confidence and communication skills [3].

Experiential learning opportunities, such as internships, further reinforce the value of networking and industry engagement. Internships provide students with supervised, authentic work experiences that complement academic learning and support the development of technical and professional competencies [4]. Research has shown that participation in internships is associated with improved employment outcomes, clearer career trajectories, and stronger alignment between academic preparation and workforce expectations [5]. However, access to these opportunities is often mediated by students' abilities to establish professional connections, highlighting the importance of intentional networking structures within engineering programs.

Despite the recognized value of networking, many opportunities available to engineering students remain informal, optional, or centralized at the institutional level, such as large career fairs. While these events provide broad exposure, they may limit sustained, discipline-specific interactions between students and industry professionals. As a result, students may struggle to build meaningful professional relationships or to connect with specific career pathways. Department-level networking initiatives offer an approach to address this gap by creating structured, accessible environments in which students can engage directly with employers and alumni who understand the skills, curriculum, and career trajectories associated with a particular program.

Alumni engagement further strengthens the impact of department-level networking by providing students with relatable role models and mentors who can contextualize academic experiences within professional practice. Alumni bring valuable industry insight, facilitate mentoring and career guidance, and often serve as connectors between students and employers [6]. Structured opportunities for alumni involvement can also lead to deeper, sustained partnerships that benefit students, academic departments, and alumni [7].

In response to these considerations, beginning in Spring 2023, an engineering department launched an annual, department-level undergraduate Networking Event. This paper examines the correlation between participation in this event and student success, defined as academic performance (GPA), participation in summer internships, and attainment of external scholarships. Additional outcomes of interest include average starting salaries and post-

graduation alumni engagement. By examining longitudinal data across multiple academic years, this paper seeks to contribute evidence-based insight into the role of structured industry engagement in undergraduate engineering education.

Literature Review

Career services offices at universities are often the primary institutional source for providing undergraduate students with networking opportunities, while academic engineering departments more frequently offer curricular experiences, such as capstone senior design projects, that connect students with industry partners [8]. Career fairs for engineering students are particularly valued for supporting internship and job attainment, as well as professional skill development and identity formation [8, 9]. Prior research has highlighted the importance of networking, as many internships and jobs are obtained through existing professional connections within the "hidden job market" [10, 11].

Despite their prevalence, institution-level events may not provide sustained or discipline-specific connections, underscoring the need for more targeted approaches. Department-level networking initiatives address this gap by creating structured opportunities for students to interact with alumni and industry professionals who possess an understanding of program-specific skills, curriculum, and career pathways.

Although career fairs and institutional networking events are common across universities, there is limited research linking student attendance at these events to measurable outcomes such as GPA, internship participation, and scholarship attainment. Existing studies primarily focus on student perceptions or immediate employment outcomes rather than examining academic or financial indicators. Consequently, the relationship between networking event participation and broader measures of student success remains underexplored.

Description of Event

The primary goal of the department-level Networking Event is to provide undergraduate students with structured opportunities to connect with industry professionals and alumni. A secondary goal is to leverage the event as a catalyst for sustained engagement, encouraging students to use these connections to increase access to internships and post-graduate career opportunities, expand professional knowledge, and identify external resources such as scholarships. Additionally, the event is intended to serve as a conduit for establishing and strengthening long-term relationships among the department, its students, industry partners, and alumni, thereby supporting continued collaboration that benefits both students and the department. These sustained relationships further enable the department to remain actively connected with external stakeholders and support initiatives including externally funded capstone design sponsorships, invited seminar speakers, participation on external advisory boards, expanded scholarship opportunities, and enhanced access to internship and career information.

Student outcomes include the development of non-technical professional skills, particularly increased confidence and comfort in communicating with industry professionals, which can enhance career readiness and potentially increase academic motivation by highlighting connections between coursework and professional pathways. Participation in the event also supports students' professional identity formation by increasing awareness of industry expectations, workplace norms, and career trajectories within the discipline. Additionally, early and repeated exposure to industry professionals may reduce barriers to engagement for students with limited prior access to professional networks, promoting broader participation in opportunities.

This paper specifically focuses on the measurable indicators, including increased participation in internships, growth in the number of external scholarships awarded to department students, and comparative analysis of academic performance (e.g., GPA) between event attendees and non-attendees. These measures seek to provide concrete evidence of the event's potential impact on both professional development and academic engagement.

Industry and alumni outcomes emphasize sustained, multi-modal engagement with the department. Measurable indicators include the number of industry professionals and alumni who remain engaged beyond the event through activities such as providing student internship and scholarship opportunities, sponsoring senior capstone design projects, hosting internship and career information sessions, delivering professional seminars, and hosting site visits. Additional metrics include growth in the number of total industry participants, the number of unique companies represented, and longitudinal participation by alumni who previously attended the event as students. Together, these outcomes seek to provide evidence of the event's potential effectiveness in fostering durable, reciprocal partnerships between industry and the department.

The intended student audience for the event includes undergraduate students enrolled in the department's programs, specifically civil engineering, environmental engineering, and naval engineering. The industry participants consist of alumni of the institution, members of professional societies, and other industry professionals across these disciplines in the tri-state area who are interested in engaging with the department. Faculty from the department are also invited to attend, supporting the interaction between students and industry while facilitating departmental involvement in the networking process.

The event is held once per year in March, providing an annual cadence that allows the department to build engagement with industry professionals over the course of the academic year. Throughout the fall semester, the department can reference the spring event in interactions with industry, creating a buildup that encourages continued engagement and strengthens relationships prior to the networking event. The event is scheduled before spring break, following mid-term exams, when student schedules are typically more predictable. It takes place in the evening, allowing industry professionals to attend after work. The format emphasizes

informal, organic networking, with light refreshments provided to encourage mingling. Faculty and staff are also present to facilitate connections, supporting students in engaging with industry participants and fostering dialogue among professionals themselves.

Industry participants are recruited through a multi-faceted and organic approach to ensure broad representation across the department's disciplines and engagement with both alumni and professionals in the field. The department leverages existing industry connections, including attendees from the previous year, senior design sponsors, external advisory board members, and past seminar speakers. Direct outreach is conducted through departmental email invitations and targeted social media posts, and attendees from prior years are encouraged to forward the invitation to colleagues in their networks.

Additional recruitment channels include the institution's alumni magazine and communications through professional societies. Students are also invited to extend the invitation to their professional networks, including previous internship employers and, for seniors, future employers. The department collaborates with the career center to reach industry partners who are frequent employers as well as new employers interested in engaging with students directly. This multi-pronged strategy fosters both continuity and expansion of industry participation, promoting diverse networking opportunities for students, and strengthening the department's professional connections.

Results

Data were collected based on attendees using multiple sources to provide a comprehensive view of outcomes. Academic performance was obtained from official university records, and internship participation was gathered from self-reports during discussions with the students' academic advisor, LinkedIn profiles, and the university career center. Scholarship information was retrieved from the university's financial system, reflecting funds awarded directly to the institution. The combined data were analyzed to identify trends in academic achievement, internship engagement, and scholarship awards, enabling a detailed assessment of participants' career readiness and development.

Students

The average cumulative GPA of departmental students who attended the annual networking event was analyzed and compared with that of departmental students who did not attend. Across all four years examined, event attendees consistently demonstrated higher average cumulative GPAs than non-attendees. In academic year 2022-2023, attendees had an average GPA of 3.64 compared to 3.42 among non-attendees. Similar patterns were observed in 2023-2024, with attendees averaging a GPA of 3.63 versus 3.38 for non-attendees, and in 2024-2025, where attendees had an average GPA of 3.65 compared to 3.43 among non-attendees. In 2025-2026, the

average GPA for attendees was 3.69 versus 3.45 for non-attendees. These results are summarized in Table 1.

Table 1- Average GPA of Event Attendees and Non-Attendees by Year

Academic Year	Average GPA of Attendees (n)	Average GPA of Non-Attendees (n)
2022-2023	3.64 (78)	3.42 (183)
2023-2024	3.63 (64)	3.38 (201)
2024-2025	3.65 (51)	3.43 (229)
2025-2026	3.69 (50)	3.45 (248)

Attendees consistently exhibited higher rates of external scholarship awards compared with non-attendees. In 2023, 39.06% of attendees were awarded scholarships in the 2023-2024 academic year, compared to 4.48% of non-attendees. This persisted in 2024, where 47.06% of attendees received external scholarships in 2024-2025 compared to 6.99% of non-attendees. In 2025, 62% of attendees received an external scholarship in 2025-2026, compared to 6.84% of non-attendees. The data is summarized in Table 2. Previous findings, as well as the department's communication strategies and outreach efforts related to external scholarships, have been previously presented [12].

Table 2- Scholarship Outcomes for Attendees and Non-Attendees

Academic Year of Scholarship Awarded	% of Attendees Awarded an External Scholarship (n)	% of Non-Attendees Awarded an External Scholarship (n)
2023-2024	39.06% (25/64)	4.48% (9/201)
2024-2025	47.06% (24/51)	6.99% (16/229)
2025-2026	62.00% (31/50)	6.84% (17/248)

Internship participation was consistently higher among event attendees compared with non-attendees across all four years. In 2022-2023, 79.49% of attendees completed a summer internship, compared to 53.55% of non-attendees, with 11 companies represented at the networking event employing at least one attendee as a summer intern. In 2023-2024, 92.19% of attendees completed a summer internship compared with 61.69% of non-attendees, with 17 event companies having at least one attendee intern. In 2024-2025, 94.12% of attendees participated in a summer internship compared to 63.32% of non-attendees, with 20 event companies employing at least one attendee as an intern. It is assumed that connections made at the March Networking Event most frequently support internships for the following summer; for example, connections made in March 2023 may have supported internships in summer 2024. As such, summer internship data is not yet available following the March 2026 event. These outcomes are summarized in Table 3.

Table 3- Internship Participation Among Attendees and Non-Attendees

Year	% of Attendees with a Summer Internship (n)	# of Event Companies with ≥ Attendee Internship	% of Non-Attendees with a Summer Internship (n)
2022-2023	79.49% (62/78)	11	53.55% (98/183)
2023-2024	92.19% (59/64)	17	61.69% (124/201)
2024-2025	94.12% (48/51)	20	63.32% (145/229)

Across the observed period, starting salaries for event attendees were consistently at or above the department's average when data were available. In 2023-2024, attendees had an average starting salary of $80,769 compared to the department average of $77,400. In 2024-2025, attendees' average starting salary increased to $81,650, with the department average of $80,300. Data for 2022-2023 was not available for attendees, while the department average that year was $74,900. These outcomes are summarized in Table 4.

Table 4- Starting Salaries of Event Attendees vs. Department Average

Year	Average Starting Salary of Attendees	Department Average Starting Salary
2022-2023	Data Not Available	$74,900
2023-2024	$80,769	$77,400
2024-2025	$81,650	$80,300

A formal control group was not feasible due to the voluntary nature of the Networking Event; however, longitudinal departmental data provide contextual evidence of a potential association. Prior to implementation of the department-level Networking Event, the average starting salary for graduates in 2020–2021 and 2021–2022 was $66,750. In the two academic years following implementation (2022–2023 and 2023–2024), the departmental two-year average increased to $76,150, representing a 14.1% rise. The most recent reported two-year average starting salary of $81,209.50 reflects an additional 6.6% increase over the period and a 21.7% increase compared to baseline. While these gains cannot be attributed solely to the networking initiative and may reflect broader labor market dynamics, the alignment suggests a meaningful correlation that merits further investigation using more rigorous controls. Due to institutional data system changes during the study period, comparable longitudinal data were not available for scholarship or internship attainment outcomes.

Industry Professionals

Industry professional attendance and alumni participation increased steadily from 2023 to 2026. In 2023, 53 professionals attended, with 71.68% identified as alumni, representing 32 unique companies. Attendance grew to 69 professionals in 2024, with alumni comprising 66.67% with 44 unique companies represented. Notably, 10 of the 12 senior students who attended in 2023 returned to the event in 2024 as alumni. By 2025, 80 professionals participated, 71.25% of whom were alumni, representing 59 unique companies. In 2024, 20 seniors attended the event as

students, and in 2025, 16 returned as alumni. Finally, in 2026, 81 professionals participated, 85.19% identifying as alumni, representing 63 unique companies. In 2025, 18 seniors attended the event as students, and in 2026, 16 returned as alumni. These data, outlined in Table 5, indicate both an overall rise in professional engagement and a growing presence of alumni among attendees.

Table 5- Industry Professional Attendance and Alumni Participation by Year

Year of Event	Professionals in Attendance	% of Alumni Among Professionals (n)	Unique Companies Represented
2023	53	71.68% (38/53)	32
2024	69	66.67% (46/69)	44
2025	80	71.25% (57/80)	59
2026	81	85.19% (69/81)	63

The event frequently serves as a pathway for industry connection with the department, linking students and professionals through multiple avenues of engagement. Professionals participating in the event contribute in diverse ways, including sponsoring senior design capstone projects, providing access to scholarships and internships, offering career opportunities, hosting site visits, delivering professional seminars, and facilitating career information sessions. The objective is for one engagement to lead naturally to another, creating a network of ongoing interactions between students and industry. Table 6 provides a summarized view of professional contributions across the three years rather than a year-by-year breakdown, as the focus is on the overall scope and cumulative impact of industry involvement. The role of these events and further industry engagement has been previously presented [13].

Table 6- Industry Professionals Supporting Department Activities

Category	# of Professional Attendees Contributing
New Senior Design Capstone Sponsors	6
Professional Seminar Speaker	10
Hosted Site Visits	2
Provided Career or Internship	20
Provided Scholarship	22
Hosted Career Information Session	7

Discussion

The results indicate a consistent correlation between participation in the department-level networking event and positive student outcomes, including higher GPA, increased scholarship attainment, and greater participation in summer internships. Over the four-year period, attendees consistently outperformed non-attendees across these measures, suggesting that engagement with industry and alumni may reinforce academic motivation, professional identity, and career readiness.

However, it is important to note that these data are correlational and do not establish causation. Students who chose to attend the event may have been more motivated, academically inclined, or already interested in industry engagement, which could partly or fully explain the observed differences. Thus, the positive outcomes observed among attendees may reflect both the benefits of the event and pre-existing student characteristics.

Scholarship attainment and internship participation were particularly notable. Connections facilitated at the event may help students access these opportunities, although it is possible that students with a strong interest in internships and scholarships are more likely to attend. Similarly, starting salaries for attendees were consistently at or above departmental averages, further suggesting that engagement with the networking event may support career preparedness, though other factors, including prior motivation and experiences, may also contribute.

It is notable that overall student attendance decreased over the three-year period, from 78 in 2023 to 50 in 2026. This decline may be attributed to factors such as scheduling conflicts, competing academic obligations, or differing levels of interest in industry engagement. Additionally, students may be connecting with industry through other avenues during the academic year, reducing reliance on a single networking event. To optimize participation, the department could consider adjusting the timing of the event, such as moving it earlier in the fall semester when students are more actively seeking internships and career opportunities.

Industry and alumni participation grew steadily over the observed period, both in total numbers and in the proportion of alumni among attendees. Professionals contributed through diverse activities, including sponsoring senior design projects, providing scholarship and internship resources, delivering seminars, hosting site visits, and facilitating career information sessions. The longitudinal participation of former student attendees who returned as professional participants underscores the event's potential to build lasting connections that span the transition from student to professional, fostering a durable network of mentorship and collaboration.

Existing literature has emphasized the importance of internships, mentoring relationships, and career fairs in supporting employment outcomes and professional skill development [8] [9]. However, much of this work focuses on institutional-level programming or student perceptions

rather than department-specific initiatives linked to measurable academic and career indicators. The present paper contributes to the literature by examining a sustained, department-level event and correlating participation not only with internship and employment outcomes, but also with GPA and scholarship attainment across multiple academic years. By incorporating longitudinal data and multiple outcome measures, this paper seeks to extend prior work that has primarily centered on short-term employment metrics or qualitative perceptions of networking value.

This paper seeks to contribute empirical evidence to ongoing conversations in engineering education regarding the impact of structured industry engagement. While networking events are common across institutions, there is limited published research linking attendance to measurable academic performance, scholarship attainment, and multi-year internship participation held at the department-level. This study offers evidence that structured, discipline-specific networking initiatives may support both academic achievement and career readiness while strengthening sustained partnerships with alumni and industry.

Overall, these findings suggest that structured, department-level networking events may connect students with industry professionals, help maintain motivation toward career goals, and provide opportunities to build resumes and experiences that enhance employability. When integrated with other departmental initiatives, such as capstone sponsorships and professional seminar series, these events appear to support academic achievement, career readiness, and sustained industry engagement.

Conclusion and Future Studies

Structured, department-level networking events can support student success by connecting students with industry professionals, fostering motivation toward career goals, and providing opportunities to build resumes and gain experiences that enhance employability. The event also strengthens long-term partnerships between the department, alumni, and industry, supporting scholarships, internships, and capstone projects.

Future research should examine how this department-level networking model can be adapted to institutions of varying sizes, resource levels, and disciplinary contexts. Comparative studies across multiple engineering programs could help identify which elements are most critical for successful implementation. Investigating scalable approaches, including virtual or hybrid formats, may further support broader adoption while maintaining meaningful student–industry interaction.

Additional future work could examine the development of critical professional skills, such as communication, teamwork, and adaptability, among participating students to better understand career readiness outcomes. Studies could also explore strategies for replicating this model in other engineering programs, including identifying best practices for engaging alumni and industry, structuring events to maximize student participation, and integrating networking

activities with curricular and co-curricular initiatives. Investigating these areas will help determine how department-level networking events can be adapted for different program sizes and contexts while continuing to support academic and professional development.

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