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# Two is Better Than One: Demonstrated Benefits of Multiple Industrial Design Internships

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## ABSTRACT

This paper investigates the benefits of industrial design students completing more than one internship during their undergraduate education. While internships are crucial for bridging academic learning with industry experience and improving employment prospects, little attention has been given to the impact of multiple internships, especially in industrial design. The study examines students from the University of Kansas, the University of Kentucky, and Western Michigan University, comparing those who completed one internship with those who completed two or more. It evaluates factors including compensation, internship duration, location, accessibility, and perceived value, focusing on the impact of successive internships on professional development. Findings show a statistically significant increase in hourly pay for second internships, suggesting that prior experience leads to better opportunities. Although mean perceived value for career impact, benefit to future, and benefit to education also increased for students who had more than one internship, only the perceived benefit to future was statistically significant. These results highlight the benefits of completing multiple internships.

**Keywords:** Industrial design education, Internship programs, Educational opportunities, Education and industry

## BACKGROUND AND CONTEXT

Internships are essential in contemporary higher education, bridging the gap between academic learning and professional practice. For industrial design (ID) students, internships provide exposure to real-world design practices, workplace culture, and industry expectations. ID education combines theoretical coursework, technical skills, and experiential learning, with internships being crucial for applying knowledge in practice. As industries seek candidates with relevant experience, internships are vital for preparing students for a competitive workforce. Research shows that internships improve employability and career readiness (Binder et al., 2014).

The timing of internships is key in a four-year undergraduate program. ID students typically intern in their junior or senior years, once foundational skills are acquired. However, early internships—such as in the sophomore year—can lead to successive internships, fostering cumulative professional development.

 

Although internships are beneficial, research on the advantages of completing multiple internships, particularly in specialized fields like industrial design, is limited. Most studies focus on single internships, leaving a gap in understanding the impact of sequential internships on professional and economic outcomes. Additionally, the varied approach to internship programs across universities leads to inconsistent support and experiences. This highlights the need for insights into how industrial design programs can better support students in securing and succeeding in multiple internships.

This study explores the benefits of completing multiple internships for ID students, examining how the timing and quality of the first internship influence the likelihood of securing a second. It also investigates the role of institutional support, focusing on how preparation, program requirements, and academic credit options affect accessibility and quality. The study includes ID students from three four-year comprehensive universities, The University of Kansas (KU), The University of Kentucky (UK), and Western Michigan University (WMU), each with different internship approaches.

## LITERATURE REVIEW

Internships are crucial for bridging academic learning with professional practice, enhancing career readiness and post-graduation employment outcomes (Binder et al., 2014). Kolb's experiential learning theory (1984) emphasizes the value of real-world application for skill and understanding development. Internships expose students to workplace expectations and industry practices not replicated in the classroom.

Research shows that students who complete internships are more likely to secure employment and earn higher salaries than those without experience (Hora et al., 2020). Internships strengthen resumes, provide networking opportunities, and offer mentorship, contributing to long-term career success (Sagen et al., 2000). They also help students build confidence in transitioning to the workforce (Sweitzer & King, 2013).

Industrial design (ID) education integrates technical skills, creative problem-solving, and user-centered design principles. Internships in ID give students the opportunity to tackle complex, real-world problems not found in classroom settings (Zegwaard & Coll, 2011). However, securing internships in this competitive field is challenging, as students must maintain a portfolio that showcases creativity and technical proficiency (Patrick et al., 2009).

While single internships are well-researched, less attention has been given to multiple internships. Studies suggest that successive internships lead to cumulative professional development and higher compensation (Wilson, 2012; Rigsby et al., 2013). Further exploration is needed to understand the impact of sequential internships in industrial design.

### Institutional Structures for Industrial Design Internships

The structure of industrial design (ID) programs is essential in preparing students for professional careers. This study examines internship strategies at the University of Kansas (KU), University of Kentucky (UK), Western

Michigan University (WMU), revealing different approaches to integrating internships, co-ops, and professional development.

Case Studies of Institutional Approaches

- Faculty-Driven Advocacy: KU and UK At KU, internships are encouraged but not mandatory, with academic credit available through the ADS 378 course. KU emphasizes portfolio preparation through its INDD 430 course and relies on faculty advocacy for internship participation. KU's program is structured in a way where students are able to graduate on time while participating in internships during the Fall, Spring, or Summer semesters. UK also encourages internships but faces challenges with limited alumni networks and faculty capacity. Students at UK are able to participate in internships in the summer.
- Mandatory Internship Model: WMU WMU requires participation in an internship for graduation. WMU mandates a professional internship with academic credit. However, this model lacks the flexibility of co-op programs, limiting placements to summer terms.

These case studies highlight a range of approaches, while KU and UK rely on faculty support and flexibility. WMU focuses on mandatory internships but with less integration.

## METHODOLOGY

The aim of this study is to compare the experiences of students participating in their first industrial design internship with the experiences of students participating in subsequent (second, third, or fourth) industrial design internships. The intent is to clarify if there is a demonstrated benefit from having more than one internship. The research employs a mixed-methods approach, incorporating surveys and qualitative interviews for data collection.

The first version of the survey was disseminated to industrial design students at Western Michigan University and the University of Kansas during the fall semester of the 2022–23 academic year. The survey was repeated (with revisions), with additional distribution to industrial design students at the University of Kentucky in the fall of the 2023–24 academic year. To date, this longitudinal study reflects 197 survey responses across two years. Across both years, responses were solicited from second, third, and fourth-year students as well as recent alumni because they are most likely to have had at least one internship experience.

In the 2022–23 and 2023–24 academic years, qualitative interviews were conducted with a small selection of survey respondents in an effort to build a more robust contextual understanding of student experiences with applying to, landing, and working in industrial design internships. Interviews were scheduled for thirty minutes and took place over Zoom. Interviewees were recruited based on their overall range of internship experiences and paired with interviewers they were unfamiliar with (in an attempt to minimize bias).

## ANALYSIS

The analysis includes responses from the 2022–23 and 2023–24 surveys that indicated having at least one internship experience (n = 107) and focuses on two specific questions:

1. Internship Information: For each internship experience (#1, #2, #3), students were asked for the name of the company where they worked, if the internship was remote or in person, where the internship was located, how long it lasted, how many hours they worked each week, and the hourly rate of pay.

The researchers introduced an 'industry relevance' rank based on the company where students interned. Well-established and well-known companies earn a score of '1,' while lesser-known companies earn a score of '0.5' Companies with minimal relevance to industrial design earn a score of '0.25.'

Mean values for hourly rate of pay, industry relevance, hours per week, and in-person or remote were compared between first and second (or subsequent) internships. Statistical significance was determined for each variable using a t-test to establish a p-value (with a p-value of <.05 indicating statistical significance).

2. Perceived Value: Students were asked to rank their overall internship experience impact on career/professional learning, benefit to future, and benefit to industrial design education. Rankings ranged from 0 to 5, with 0 showing no impact and 5 showing maximum impact.

This question had a lower response rate (n = 73) because it asks about overall internship experience (not experience with each individual internship). Mean values for perceived impact on career/professional learning, benefit to future, and benefit to industrial design education were compared for students who had one internship experience and students who had more than one internship experience. Statistical significance was determined for each variable using a t-test to establish a p-value (with a p-value of <.05 indicating statistical significance).

## OUTCOMES AND DISCUSSION

In comparing industrial design students' first and subsequent internship experiences, the mean (average) hourly rate of pay and industry relevance were both higher for the second internship. The mean value for in-person or remote (with .5 indicating a remote job, .75 indicating hybrid, and 1 indicating in-person) was also higher, suggesting a higher likelihood for the internship to be in-person. The mean value for hours per week was slightly lower for the second vs. the first internship experience.

**Table 1:** Comparison of first and subsequent internship experience.

| Variable | Mean (First Internship) | Mean (Second Internship) | P-Value |
|---|---|---|---|
| Hourly Rate of Pay | 17.53592105 | 20.75892857 | 0.027954 |
| Industry Relevance | 0.71381579 | 0.784482759 | 0.202183 |
| Hours per Week | 34.02631579 | 33.94827586 | 0.972214 |
| In-Person or Remote | 0.868421053 | 0.896551724 | 0.500838 |

Importantly, p-values indicate that the only statistically significant difference is in hourly rate of pay. This suggests that students have higher earning potential after completing their first industrial design internship.

For students who had more than one industrial design internship, the mean perceived impact to career, benefit to future, and benefit to industrial design education were all higher than for students who had only one internship. For all students with internship experience, the mean perceived impact of their experiences was highest in regard to benefit to their future. This was also the only variable that showed a statistically significant difference between students who had one internship and students who had more than one internship.

**Table 2:** Perceived impact of industrial design internships.

| Perceived Impact to | Mean (One Internship) | Mean (More than One Internship) | P-Value |
|---|---|---|---|
| Career | 3.933333333 | 4.357142857 | 0.09996051047 |
| Benefit to Future | 4 | 4.535714286 | 0.03598734807 |
| Benefit to ID Education | 3.340909091 | 3.821428571 | 0.2010255409 |

## DISCUSSION POINTS

The findings from this study reinforce the significant value of internships in industrial design education, with data suggesting that completing more than one internship provides even greater benefits. While a single internship enhances career readiness, a second internship appears to offer further advantages, particularly in terms of financial compensation, professional confidence, and exposure to diverse workplace cultures.

The statistically significant increase in hourly pay for second internships suggests that employers place higher value on candidates with prior internship experience. This could be attributed to the fact that students entering their second internship have already demonstrated workplace competency, making them more attractive to employers. Additionally, the increased pay rate could signal a shift in employer perception, signifying the students with more experience are more valuable to the employer.

Beyond financial incentives, students with multiple internships report a greater perceived benefit to their future. One possibility is that students who complete more than one internship experience different office environments, project structures, and team dynamics. Exposure to multiple professional settings likely helps students develop a broader understanding of workplace

culture and adaptability, increasing their confidence in navigating their future careers. Furthermore, students who may have had a less-than-ideal first internship are provided with an opportunity for a more positive experience, mitigating any negative perceptions about their professional trajectory.

Another crucial factor to consider is the role of financial stability in internship accessibility. Based on qualitative interviews done in tandem with the survey referenced in this study, financial limitations serve as a barrier for some students in securing internships, some students simply cannot afford internships because of the costs associated with temporary relocation.

Additionally, the study highlights the impact of mentorship. Having different mentors across internships allows students to gain diverse perspectives on industry practices and professional growth. This exposure not only broadens their contextual understanding but also strengthens their ability to find a workplace culture that aligns with their preferences and career goals.

Given these findings, industrial design programs should encourage students to apply for internships earlier in their academic careers, particularly during their sophomore year. Securing an internship at this stage increases the likelihood of obtaining a second, higher-quality internship, which in turn enhances professional preparedness and employability upon graduation.

## CONCLUSION

This study underscores the benefits of completing more than one internship in industrial design education. The data demonstrate that second internships offer statistically significant pay increases, as well as improvements in perceived benefits to the future. While the exact reasons behind these advantages remain uncertain, exposure to different work environments, increased professional confidence, and financial incentives likely contribute to these outcomes.

Given the clear advantages, academic programs should proactively support students in securing early internship opportunities. Encouraging sophomore-year applications could significantly improve students' chances of obtaining multiple internships, leading to higher pay and stronger professional networks before graduation.

Future research should aim to collect additional data to further establish statistical significance across more variables. Additionally, investigating the causality behind why multiple internships lead to greater perceived benefits would provide valuable insights. It is also worth exploring whether students applying for internships earlier tend to be higher-achieving individuals, which could influence the trends observed in this study. By continuing to refine our understanding of the benefits and impacts of internships, educators and institutions can better prepare industrial design students for successful careers.

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