

Are You Truly Prepared? A Review and Policy Suggestions for University of Technology Students Off-Campus Internships

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Abstract

The integration of theory and practice in off-campus internships aimed to enhance students' professional competence and employability. However, pitfalls were identified in the implementation, such as unclear internship content, students' insufficient understanding of the internship site, and perfunctory pre-internship briefings, all contributing to suboptimal internship results. Therefore, the primary objectives of this study are as follows: 1. To investigate the execution status of tasks that school units needed to undertake before off-campus internships. 2. To explore system implementation, identify deficiencies, and propose specific policy recommendations. The study employed an online questionnaire survey, assessing interns from university sophomores to seniors in 2023, with a total of 1,026 valid responses. Data analysis was conducted using the SPSS statistical software. The results indicated that interns scored lowest in understanding the "organizational and departmental conditions within a company," "industry conditions," and "participation in pre-internship briefings," suggesting insufficient pre-internship briefing implementation by the school and a lack of student understanding of industry conditions and internship institutions. To address these issues, the study proposed the following recommendations: 1. Establish clear "Technical and Vocational College Student Off-Campus Internship Regulations," emphasizing mandatory attendance at pre-internship briefings to ensure students understand the industry. 2. Create a "Student Off-Campus Internship Self-Assessment Form" to strengthen collaboration between schools and internships through self-assessment, facilitating a smooth transition from internship to employment and achieving the teaching goals of technical and vocational college student off-campus internships.

Keywords: Off-Campus Internship, Industry-Academia Collaboration, Intern, Internship System, Internship Organization

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Introduction

Off-campus internships blend theoretical knowledge with practical skills to enhance students' professional capabilities and employability potential. However, several issues persist during the internship process, such as unclear internship objectives, inadequate pre-internship orientation for students, and perfunctory pre-internship briefings. These problems often result in ineffective internship outcomes. When students enter the workforce after graduation, they encounter a gap between the theoretical knowledge acquired in school and its practical application in the workplace. This discrepancy highlights a mismatch in the values, concepts, and work attitudes instilled by the school, resulting in a phenomenon commonly referred to as reality shock (Ko et al., 2014).

Off-campus internships are pivotal for developing students' practical skills and providing exposure to real work environments (Ou, 2021). Students engage in internships arranged by schools and matched with relevant companies or institutions to enhance their adaptability and competitiveness in the job market, mitigating the impact of transitioning from school to work (Sides & Mrvica, 2017).

Off-campus internships allow students to experience the workplace early, aiding in career decision-making and shortening the career exploration period (Department of Technological and Vocational Education, 2017). However, discrepancies exist between internship experiences and students' ideals, as summarized below:

I. Off-Campus Internships and Part-Time Work Often Blur the Lines, Resulting in Numerous Wage Disputes

While interns can technically be defined as laborers according to the "Labor Standards Act," their status becomes ambiguous due to the educational nature of internships. A survey conducted by the Taiwan Higher Education Union Youth Action Committee (2018) revealed that 80.3% of interns have an employment relationship with companies, yet 67.1% receive no salary or subsidy. Research indicates a positive correlation between paid internships and effectiveness (O'Higgins & Caro, 2021), whereas unpaid internships are negatively associated with job search time and job satisfaction (Crain, 2016).

II. The Regulatory Framework for Off-Campus Internships is Incomplete, Leading to Compromises in Students' and Companies' Rights and Interests

In an effort to protect students' rights, the Ministry of Education introduced the "Draft Law On Off-Campus Internship Education For Schools Above Junior College Level" in 2019, classifying internship roles into general and work-oriented types. However, this law lacks protection under the "Labor Standards Act" and requires cooperation from companies (Wu & Lin, 2020).

III. The Mechanisms for Assessing, Visiting, and Counseling Interns Often Lack Depth, Resulting in Limited Benefits From Internships

Schools must ensure students' growth during internships (Lei & Chen, 2021). Nevertheless, many schools rely on paper reports and counseling records for evaluation, lacking robust supervision (Huang, 2020). The Ministry of Education prioritizes quantitative assessment over qualitative evaluation, potentially creating a false impression of enhanced employability.

In conclusion, a comprehensive understanding of relevant regulations is imperative to reevaluate and refine internship systems and norms from the perspectives of industry, government, and academia. This endeavor will not only strike a reasonable balance to achieve the intended goals of internships but also garner widespread recognition from the industry. Moreover, schools must enhance their management and supervision of internships to ensure that outcomes accurately reflect students' learning achievements and effectively bridge the gap between educational and workplace demands. Hence, this study aims to: 1. Investigate the current status of pre-internship preparations by educational institutions; 2. Examine the implementation of internship systems, identify shortcomings, and propose specific policy recommendations.

Literature Review

Relevant Regulations on Internships

Technological and vocational colleges actively promote students' participation in off-campus internships to bridge the gap between theory and practice. This enables students to gain early insights into the industry and seamlessly integrate into the workforce after graduation. The Ministry of Education proposed the "Technical and Vocational Education School Law Draft" in 1984, executed the first phase of the "Technical and Vocational Education Reform Program" in 2009, and due to significant results, further initiated the "Second Phase of Technical and Vocational Education Reform Program" in 2013. This emphasized the importance of technological and vocational education. In 2015, the "Technical and Vocational Education Act" was promulgated by presidential order, aiming to narrow the gap between educational settings and industry demands (Chang & Chang, 2016). To enhance the overall policy of technological and vocational education, the "Third Phase of Technical and Vocational Education Reform Program" was planned in 2018, emphasizing industry-academia collaboration, linking the workplace, vocational training, and schools into a networked form of technological and vocational education to cultivate talents required by industries (Executive Yuan, 2021).

To enable students to experience the workplace early, cultivate correct work attitudes, inspire learning, and plan for future career development, while at the same time learning from enterprises, integrating theoretical teaching with practical application, strengthening students' professional interests, and developing professional practical skills (Department of Technological and Vocational Education, 2018), the Ministry of Education formulated regulations on off-campus internships. For instance, Article 44, Paragraph 1 of the "Senior High School Education Act" announced in 2013 explicitly states the need for strengthening internships in technical high schools. Furthermore, the "Technical and Vocational Education Act" promulgated in 2015 specifies that schools above senior high level conducting vocational education should design their professional courses in collaboration with industries. As stated in Article 12 of the Act, schools may open relevant internship courses based on the nature of departments, institutes, programs, or courses. If these internships are conducted off-campus, the school should determine the implementation methods, internship venues, faculty, credit recognition, counseling, and other related matters unless specified otherwise by laws or regulations. Therefore, the regulations related to off-campus internships demonstrate the importance of these internships and the mission entrusted by the government. In 2015, the Ministry of Education published the "Performance Assessment Measures for Internship Courses in Schools Above Junior College Level," that incorporated internship course assessment into school administration evaluations and conducted assessments according to

the school evaluation procedures or entrusted academic groups or professional evaluation organizations to conduct periodic evaluations regarding internship courses. (Please refer to Table 1 for details on regulations related to off-campus internships).

Table 1: Regulations Related to Off-campus Internships

Regulation	Publication Year	Target	Description
“Guidelines for Subsidies and Promotion of Industry-Academia Collaboration Projects by the Ministry of Education”	2007	Industry–Academia Collaboration Projects	Establish an education model based on studying and working, promoting the practical characteristics (on-the-job training) of technological and vocational education.
“Technical and Vocational Colleges Handling Industry–Academia Collaboration Special Class Matters”	2014	Industry–academia collaboration special class	Matters related to contracts, vendor qualifications and required procedures, counseling mechanisms, termination, and other relevant matters were specified.
“Regulations for Implementing Industry–Academia Collaboration in Schools Above Junior College Level”	2006	Schools Above Junior College Level	Related to off-campus internships in Articles 6 and 6-1 (amended in 2017).
“Guidelines for Technical and Vocational Colleges in Opening Off-Campus Internship Courses with Subsidies from the Ministry of Education” (abolished in 2016)	2009	Schools Above Junior College Level	Encourage colleges to open off-campus internship courses, specially formulated for this purpose.
“The Act of the Cooperative Education Implementation in Senior High Schools and the Protection of Student Participants’ Right”	2013	Senior High School Cooperative Education Students	Setting up the system of cooperative education, cooperative contracts, training agreements, safeguarding the rights of students in cooperative education, supervising the cooperation, and outlining penalties.
“Senior High School Education Act”	2013	Senior High Education	Article 44, Paragraph 1, specifies the need to strengthen general education, experiments, and internships in technical high schools.
“Implementation Measures for Internship Courses in Senior High Schools”	2014	Senior High Education	Established according to Article 44, Paragraph 2 of the “Senior High School Education Act.”

Regulation	Publication Year	Target	Description
“Technical and Vocational Education Act”	2015	Junior High to College	Article 1 emphasizes the practical characteristics of technological and vocational education, cultivating talents in various industries. Article 12 specifies that schools may open relevant internship courses based on the nature of departments, institutes, programs, or courses. Article 13 explains that competent authorities should conduct performance evaluations on internship courses conducted by schools.
“Performance Assessment Measures for Internship Courses in Schools Above Junior College Level”	2015	Schools above Junior College Level	Established according to Article 13, Paragraph 1 of the “Technical and Vocational Education Act.”

Source: Compiled by this study.

International Experiences and Regulations on Off-Campus Internships

In the United States, the U.S. Office of Personnel Management promotes the “Pathways Programs for Students and Recent Graduates to Federal Careers,” which offers opportunities for current students to intern with the federal government. Interns can receive partial compensation, and outstanding performers may transition to full-time positions (U.S. Office of Personnel Management, 2012b). This program is primarily driven by the hiring agency, requiring an internship contract with tasks relevant to the intern’s academic background. Internships can last up to a year, during which students accumulate work experience. If they meet the agency’s qualification review, they can become full-time employees within three months of completing the internship (U.S. Office of Personnel Management, 2012a).

The dual system’s basic concept originates from German educator Kerschensteiner’s work education theory, which aims for students to possess both theoretical knowledge and practical skills (Feng & Chen, 2006). The dual system’s vocational education training primarily occurs at business units, with two to three days dedicated to classroom learning for theoretical grounding. This approach allows students to complete their studies while aligning with industry realities, thereby enhancing their future employability (Chang & Yu, 2014).

In Switzerland, the duration of the dual system varies by industry, usually ranging from two to four years. Students must first find a company and then a school, planning where to learn specific professional skills. If a company agrees to cooperate, the mentor must be certified, and both parties must sign relevant contracts. The mentor uses their experience to help and guide the apprentice through regional exams (Chang & Tseng, 2014). Consequently, Swiss students entering the workforce have clear goals and, with their mentor’s help, obtain the Federal VET Diploma, which certifies comprehensive training in a specific professional field. This diploma serves as proof of their expertise, helping them find related jobs even if they become unemployed in the future (Yeh, 2013).

Chang and Lin (2017) reviewed the apprenticeship systems in Germany, Austria, and Switzerland through literature and found that each country imposes limitations on the number of participants in courses and training. Upon completing their training, interns can immediately enter the workforce. Additionally, all three countries require a certification exam after training to assess skills and knowledge (as shown in Table 2).

Table 2: Features and Analysis of Apprenticeship Vocational Education in Germany, Austria, Switzerland, and Taiwan

	Germany	Austria	Switzerland	Taiwan
Policy and Regulations	Vocational Education Law	Vocational Education Law	Federal Vocational Education Act	Technical and Vocational Education Act
Curriculum and Teaching	Framework teaching plan One-on-one teaching	Modular curriculum One-on-one teaching	Modular curriculum, small class size (less than 10 students) or one-on-one teaching	Competency-based curriculum without specified teacher-student ratio
Learning Outcomes	Primarily enterprise training supplemented by vocational school education, allowing for immediate employment and direct entry into the workforce.	Primarily enterprise training supplemented by vocational school education, allowing for immediate employment and direct entry into the workforce.	Primarily enterprise training supplemented by vocational school education, allowing for immediate employment and direct entry into the workforce.	Primarily vocational school education, cannot immediately enter the workforce, requires additional transition education
Workplace Performance and Skill Assessment	School graduation exam; qualified students receive a vocational school graduation certificate. After completing enterprise training, they receive a training qualification certificate. Both qualifications are needed to apply for the national vocational qualification certificate exam and to obtain the national vocational qualification certificate.	The work skills assessment includes a theoretical oral exam and professional practice. Passing the apprentice exam awards a vocational qualification certificate.	Passing rigorous exams by regional examination committees (similar to Taiwan's skills or technical competitions) awards vocational certification.	School graduation exam; qualified students receive a vocational school graduation certificate. There is no mandatory requirement to take the technician skills certification for national professional certification.

Source: Chang & Lin (2017). "Apprenticeship Training Systems in Germany, Austria and Switzerland: Implications for Taiwan's Vocational Education." *Taiwan International Studies Quarterly*, 13(1), 121-140.

Common Issues in Off-Campus Internships in Taiwan

The implementation of off-campus internships in Taiwanese technical high schools and vocational colleges has faced several deficiencies, preventing the internships from achieving their intended benefits and compromising student rights. In light of this, this paper compiles the following common deficiencies in off-campus internships at Taiwanese technical high schools and vocational colleges:

Unclear Internship Content Leading to Students Becoming Cheap Labor

Embodying the spirit of university autonomy, each school develops its unique characteristics and plans different types of off-campus internships, courses, teaching methods, and student learning approaches according to various professional fields. Some vocational colleges, considering cost factors, reduce teaching costs and expenses by heavily relying on off-campus internship credits, hastily initiating internships. This can result in arbitrary placements for students or require them to find their own internship companies (Chen, 2021; Chung & Hsu, 2019). Lei and Chen (2021) argue that companies may not invest the time and manpower needed to co-develop internship plans or provide individualized professional technical training. Moreover, educational institutions cannot enforce strict adherence to regulations by companies. If companies do not understand the internship system, and only the schools guide students and ensure compliance, the internship content may become meaningless, reducing students to cheap labor and possibly leading to a negative end to the internship.

One-Sided Internship Planning With Low Consensus Among Enterprise Mentors

Schools often have clear guidelines for pre-internship preparation. However, literature suggests that this one-sided planning by schools can lead to a disconnect with the companies, increasing the burden of cooperation. It is recommended that companies select suitable mentors to lead interns and work with schoolteachers to achieve consensus and understand the students' levels to provide tailored guidance. Chang and Wang (2016) and Yeh (2016) found that current internship arrangements are predominantly school-planned and involve mainly private enterprises, making quality control difficult. This affects the selection of internship placements and students' learning rights, ultimately impacting the effectiveness of off-campus internships.

Insufficient Pre-internship Training Reduces Internship Effectiveness

Chang and Wang (2016) divided internships into three stages, with the first stage being pre-internship preparation and matching internship opportunities. Students obtain off-campus internship information through school units, teacher recommendations, and company registrations. Departments then select and assess the relevance of these internships to their specialties, organize student briefings, company presentations, and site visits to establish internship relationships between students and companies. This process also involves ensuring that parents understand the significance of off-campus internships and gain their consensus and support. Chang et al. (2019) suggest that, before internships, teachers, industry mentors, and students have specific tasks. Teachers should hold pre-internship briefings to explain visit schedules, grading criteria, report content, group considerations, work regulations, and professional ethics. Industry mentors should attend these briefings to explain industry conditions, company organization, department functions, work regulations and ethics, and

standard operating procedures. Students should participate in these briefings to understand work regulations, professional ethics, internship work overview, industry conditions, company organization, department functions, and the importance of standard operating procedures.

Research Method

This study aims to investigate the current implementation status of pre-off-campus internship tasks by school units, propose practical strategies for internship promotion, and iteratively refine these strategies.

Subjects and Sampling Methods

The study employs literature review and document analysis methods. Relevant practical literature on “off-campus internship regulations” and the “current status of off-campus internships” from domestic and international sources is collected based on the research objectives. This includes compiling historical off-campus internship regulations, documents related to “promoting vocational school internship course field performance evaluation” (including representative school internal documents), comparing plans and documents related to domestic and international off-campus internship experiences and standards, and exploring the execution strategies of internships.

The questionnaire of this study was distributed to students participating in off-campus internships in colleges and above throughout Taiwan, using convenience sampling. The survey period was from May 10th, 2023 to July 16th, 2023. A total of 1,557 questionnaires were distributed, out of which 531 were from students who had not taken off-campus internship courses. The valid response rate was 65.8%, with 1,026 completed questionnaires returned.

Research Tools

The research employed a questionnaire survey method, using the “Investigation of Technological College Students’ Participation in Off-Campus Internship Courses” questionnaire as the research tool. The questionnaire was designed based on the research nature and literature review results, focusing on “pre-departure arrangements for off-campus internship courses.” The questionnaire utilized a Likert five-point scale scoring method, where respondents rated their agreement level based on the question statements regarding technological college students’ experiences and thoughts on participating in off-campus internship courses. The scale options were sequentially divided into 5, representing “Strongly Agree,” 4 for “Agree,” 3 for “No Opinion,” 2 for “Disagree,” and 1 for “Strongly Disagree.” Higher scores indicate a more positive experience in technological college students’ participation in off-campus internship courses, and vice versa.

Research Results

This study used SPSS 25.0 statistical software to analyze the data from 1,026 valid questionnaires collected. Here are the key findings:

Demographic Analysis of Participants

The statistical analysis focused on 1,026 students involved in internship courses, based on quantitative data from the questionnaire. Table 3 presents the demographic breakdown. Female students (51.1%) slightly outnumbered males (49.9%) in terms of gender distribution. The largest group of students came from the industrial cluster (30.3%), followed by the hospitality cluster (28.8%) and the business and management cluster (17.7%). Regarding entrepreneurship-related course credits, a higher percentage of students had not taken such courses (67.2%) compared to those who had (34.8%). Internship participation was highest among fourth-year students (48.8%), followed by third-year students (including summer breaks from third to fourth year) (38.9%). In terms of internship types, annual internships were the most common (50.1%), followed by semester internships (30.6%). For internship advisors, most students were supervised by full-time professors (65.4%), with specialized instructors also playing a role (23.6%). The primary method of finding internship placements was through student volunteering and enterprise selection (60.2%), although some internships were arranged entirely by departments or teachers (20.8%). Concerning compliance with labor laws, the majority of students indicated adherence (89.2%) rather than non-compliance (10.8%). Regarding payment, most students received basic wages (54.7%), while some received wages exceeding the basic amount (21.8%).

Table 3: Demographic Distribution of Students Participating in Internship Courses

(n=1026)

Background Variables	Category	Number of Respondents	Percentage (%)
Gender	Male	512	49.9%
	Female	514	51.1%
Field of Study	Industrial Cluster	308	30.0%
	Business and Management Cluster	182	17.7%
	Hospitality Cluster	295	28.8%
	Design Cluster	112	10.9%
	Maritime and Aquaculture Cluster	5	0.5%
	Agriculture, Forestry, Fisheries, and Animal Husbandry Cluster	12	1.2%
	Home Economics Cluster	31	3.0%
	Food Cluster	5	0.5%
	Foreign Language Cluster	71	6.9%
	Arts and Film Cluster	5	0.5%
Ever Taken Entrepreneurship-Related Course or Credits	No	689	67.2%
	Yes	337	34.8%
Period of Off-Campus Internship	1st Year (including summer break between 1st and 2nd year)	14	1.4%
	2nd Year (including summer break between 2nd and 3rd year)	112	10.9%
	3rd Year (including summer break between 3rd and 4th year)	399	38.9%
	4th Year	501	48.8%

Background Variables	Category	Number of Respondents	Percentage (%)
Type of Internship	Winter/Summer Internship	189	18.4%
	Semester Internship	314	30.6%
	Annual Internship	514	50.1%
	Other	9	0.9%
Role of Internship Supervising Teacher	Full-Time Professor in Department	671	65.4%
	Part-Time Professor in Department	113	11.0%
	Specialized Instructor	242	23.6%
Channel for Finding Internship Placements	Arranged Entirely by Department or Teacher	213	20.8%
	Student Volunteer with Enterprise Selection	618	60.2%
	Student Self-Search	184	17.9%
	Other	11	1.1%
Whether the Daily Internship Hours Comply with Labor Laws (maximum 8 hours per day, total overtime not exceeding 12 hours; not exceeding 40 hours per week; no internship between 10 pm and 6 am)	Yes	915	89.2%
	No	111	10.8%
Receive Hourly or Monthly Wages During Internship (Learning or Working Type)	No Salary Received	133	13.0%
	Receive Below Basic Salary	108	10.5%
	Receive Basic Salary	561	54.7%
	Receive Above Basic Salary	224	21.8%

Source: Compiled by this study.

Analysis of Each Stage Item

This study examines the attributes of the sample and the concentration trend of responses for each item through descriptive statistics of the mean and standard deviation. The results show the degree of agreement of students who participated in off-campus internship courses regarding the pre-departure phase, indicating the level of implementation of off-campus internship courses by the school. Among them, the two items with the highest level of agreement before the internship are “11. I have indeed signed the off-campus internship contract” and “12. I have indeed informed my parents or family members about the relevant internship course information.” The three items with the lowest level of agreement are “06. I indeed understand the current situation and departmental status of the company,” “05. I indeed understand the current situation of the industry,” and “01. I have participated in pre-internship briefings,” as shown in Table 4.

Table 4: Degree of Agreement of Students Participating in Off-Campus Internship Courses

Off-Campus Internship Course Items Corresponding to Each Stage	Degree of Agreement		
	Mean	Standard Deviation	Ranking
Pre-Internship			
01. I have participated in pre-internship briefings	4.19	.989	10
02. I indeed understand the overview of internship work content	4.22	.822	9
03. I indeed understand the internship work regulations	4.34	.743	5
04. I indeed understand the content of professional ethics	4.44	.689	4
05. I indeed understand the current situation of the industry	4.15	.809	11
06. I indeed understand the current situation and departmental status of the company	4.05	.896	12
07. I indeed understand the importance of standard operating procedures	4.31	.765	7
08. I indeed understand the format and content of internship reports	4.26	.825	8
09. I indeed understand the completion credits or hours of the internship course	4.47	.695	3
10. I indeed understand the ways to seek solutions if the internship course is not suitable	4.33	.788	6
11. I have indeed signed the off-campus internship contract	4.59	.666	1
12. I have indeed informed my parents or family members about the relevant internship course information	4.58	.667	2

Source: Compiled by this study.

Conclusion and Recommendations

As technology continues to advance, the significance of off-campus internships for vocational school students is becoming increasingly pronounced. However, the deficiencies and challenges encountered during the internship process, such as unclear internship content, interns' limited understanding of the industry, and the formalized nature of pre-internship briefings, significantly impact the quality and efficacy of internships. Through a questionnaire survey of sophomore to senior students in 2023, this study vividly highlights these issues and proposes specific policy recommendations to ameliorate the current scenario.

One recommendation from this study is the establishment of clear "Regulations for Off-Campus Internships for Vocational School Students." These regulations should not only mandate students' participation in pre-internship briefings to ensure they possess a fundamental understanding of the relevant industry. Still, they should also incorporate explicit safety and compensation provisions to safeguard students' rights throughout their internships.

Another vital step from this study is the development of a “Student Off-Campus Internship Self-assessment Form,” which plays a pivotal role in fostering collaboration between educational institutions and industries. This self-assessment tool can enhance students’ comprehension of internship organizations and facilitate a seamless transition from internship to employment, thereby aligning with the educational objectives of vocational education.

In conclusion, the implementation of clear internship regulations and assessment mechanisms is essential not only for enhancing internship quality but also for better serving students’ career development needs. Vocational schools should prioritize and implement these recommendations to nurture graduates capable of showcasing professional competence and innovation in today’s rapidly evolving work environment.

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