The Impact of the Student Internship Program on the Skill Development of PUP BS Economics Students: A Basis for Curriculum Improvement from the Perspective of the Students

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ABSTRACT:
This study evaluates the impact of internships on skill development and curriculum alignment within the Bachelor of Science in Economics program at the Polytechnic University of the Philippines from the perspective of the student interns. Using a quantitative design, 125 student-interns who completed the Summer 2023–2024 internship course were surveyed with a validated questionnaire covering industry readiness, skills application, course relevance, and perceptions of curriculum improvements. Descriptive statistics revealed that most interns (83.2%) experienced purely onsite placements, received orientation on the organizational mission (96.8%) and structure (95.2%), and achieved clear learning outcomes (88.8%). Supervisory support was universal, with 91.2% reporting regular performance evaluations. Interns rated their industry readiness highly (mean = 4.15/5), especially in ethics, teamwork, and adaptability, while scoring lower in entrepreneurial and leadership competencies. Skill application during internships was also strong (mean = 4.30/5), particularly in professionalism, initiative, and time management, whereas leadership and public speaking were less practiced. Core economics and technical writing courses were considered highly relevant, while general education and advanced mathematics were perceived as moderately or slightly relevant to internship tasks. Independent-samples t-tests indicated no significant differences in readiness based on employer type, commute time, or internship duration, but larger HTEs (≥200 employees) correlated with greater skill application. Interns supported offering the internship during a single regular semester and increasing the 200-hour requirement. Findings suggest curricular revisions to enhance leadership, entrepreneurship, and communication modules, as well as strengthen partnerships with larger host organizations to optimize student learning outcomes.

Keywords: Internship, Economics Graduates, Skill Development, Curriculum Development, Internship Trainers Assessment.

1. Introduction

The global economy is becoming increasingly knowledge-based, demanding graduates who possess a strong set of skills and competencies. Internships, serving as a bridge between academia and industry, play a crucial role in preparing students for the workforce. This research program aims to assess the impact of internships on student learning outcomes comprehensively, identify gaps between academia and industry, and propose strategies for enhancing curriculum alignment.

To ensure that every State University and College (SUC) in the Philippines, including the Polytechnic University of the Philippines (PUP), produces industry-ready graduates, a persistent challenge arises: the mismatch between the skills students acquire in academia and the demands of the job market. While higher education institutions strive to offer relevant curricula, the rapidly evolving business landscape necessitates continuous evaluation and adaptation of academic programs. This research aims to provide a comprehensive understanding of internship effectiveness, industry expectations, and curriculum alignment for the Bachelor of Science in Economics (BSE) program, to bridge this gap.

The significance of internships in student development has been acknowledged for decades. Early studies concentrated on the experiential learning aspect of internships, a central theme in educational research for many years. These studies primarily highlighted the experiential learning facet of internships (Krumboltz & Hyland, 1992). Later research has expanded to encompass a broader range of student outcomes. Furthermore, a meta-analysis by Yeung and Lee (2016) emphasized the considerable impact of internships on various student outcomes, including career development, employability, and academic performance. Their findings reinforced the idea that internships are essential in bridging the gap between academia and the professional world.

Nugent and Peltier (2011) explored the development of employability skills through internships. Their meta-analysis revealed that internships effectively hone essential skills such as communication, problem-solving, and teamwork. Employers highly value these skills and contribute to students' overall career readiness. While not exclusively focused on internships, Kuh, Cruce, Schuh, and Whitt's (2008) conceptual framework on student engagement provides a broader context for understanding the role of internships in holistic student development. The authors emphasize the importance of learning, development, and campus life in fostering student success; internships can be a cornerstone of these experiences.

In addition, Sax, Astin, and Korn's (2001) longitudinal study offers a historical perspective on the evolving role of internships in higher education. Their research highlights the increasing acknowledgment of internships as a valuable component of the undergraduate experience and their contribution to students' post-graduation outcomes. Collectively, these studies provide compelling evidence for the significance of internships in student development. By offering practical experience, enhancing employability skills, and encouraging career exploration, internships play a vital role in preparing students for successful transitions into the workforce.

However, as the job market has become more competitive, the focus has shifted to assessing the impact of internships on employability and career success. Recent research has also highlighted the significance of industry-academia collaboration in curriculum development. Lucietto et al. (2021) emphasized the importance of industry-academia collaboration in education, highlighting the challenges graduates face in transitioning to the competitive job market. By involving industry experts in curriculum design, universities can ensure that programs equip students with the skills and knowledge needed to meet industry expectations. Furthermore, industry-academia partnerships can promote experiential learning opportunities, such as internships and industry projects, which enhance students' practical skills and competencies. As emphasized by Satterfield, Wilson, and Houdek (2023), these collaborations facilitate the development of professional networks and

mentorship, providing students with invaluable insights into industry practices.

While this research focuses on the field of Economics, its implications extend to broader areas of study. For instance, understanding the factors that contribute to effective internships can be applied to other disciplines. Furthermore, the research findings can inform the development of career guidance and counseling services, which are essential for students' overall well-being and success. Ultimately, this research will contribute to building a more skilled and adaptable workforce, crucial for the country's progress and competitiveness in the global economy. By addressing the identified problem and leveraging insights from this research, the study can significantly enhance student learning outcomes, improve industry-academia collaboration, and ultimately foster a more skilled and employable workforce. Internships serve as a form of pre-employment human capital investment that enhances workforce readiness and reduces school-to-work transition frictions.

While earlier research has explored internship outcomes and employability, this study offers program-level evidence from a public university in an emerging economy, emphasizing how organizational size and the presence of alumni influence internship learning outcomes. It also shows that the quality and structure of internship experiences, rather than duration alone, play a more substantial role in shaping skill application and industry readiness.

Theoretical Framework

This study is based on the Theory of Human Capital, which argues that investments in education and training, particularly through learning and skills development, significantly enhance productivity and income. Human capital theory suggests that investing in education is crucial for acquiring the necessary skills and training, which subsequently increases individual capital (Blundell et al, 1999). Furthermore, it incorporates Albert Bandura's Social Learning Theory, which stresses the importance of observational learning, imitation, and modeling in the learning process.

By enhancing the alignment between education and the job market, this research fosters the development of a skilled workforce. This, in turn, can lead to increased productivity, economic growth, and lower unemployment rates. Additionally, by identifying the challenges faced by HTEs in implementing internship programs, the study can guide the creation of policies and support systems that facilitate internship placements. This study acts as a mechanism through which the University listens to partner employers and adapts to the ever-changing needs of the industry.

Research Objectives

This study builds on existing knowledge by providing a comprehensive examination of internship experience. The findings of this research are expected to inform several key stakeholders: the University, by offering valuable insights for curriculum improvement and enabling institutions to better align their programs with industry needs; Current and Future Students, by helping them understand the skills and competencies required by employers, allowing them to tailor their internship experiences accordingly; Host Training Establishments, by giving feedback on the effectiveness of their internship programs and enabling them to make necessary improvements; and Policymakers, by facilitating informed decisions regarding the development of policies that support internship programs and enhance graduate employability. Specifically, this study sought to assess the perceived: (a) level of student-interns' industry readiness during their internship; (b) application of skills by PUP BS Economics student-interns during their internship; (c) relevance of BS Economics courses and subjects in their internship experience; and to determine whether there are significant differences in the measures stated when grouped according to Type of Employer, Host Training Establishments' Company Size, Travel and Commute Arrangement, Completed Internship Hours, and Type of Job Arrangement.

2. Methodology

This study examines the perceived readiness of the industry, application of skills, and relevance of BS Economics academic courses to the

internship and current industry experience of PUP BS Economics student-interns. Furthermore, it seeks to determine whether there are significant differences in these measures based on their internship experiences, including the type of employer, the size of host training establishments, travel and commute arrangements, completed internship hours, and types of job arrangements.

1. Research Design, Population, Sampling, and Data Collection

This study adopts a quantitative research design that utilizes a descriptive and comparative approach to analyze the profile of student-interns, their industry readiness, and the application of skills during internships. It employs univariate analysis to describe the characteristics and behaviors of the variables using frequency distributions (Babbie, 2021) and the percentage of respondents who met specific criteria. The research questionnaire was developed and validated by an expert in the field of Economics and approved by the PUP University Research Ethics Committee through the issuance of Ethical Clearance. The questionnaire is structured to allow responses from given options, such as "yes" or "no." The population consists of 125 student-interns from the PUP Bachelor of Science in Economics (BSE) program who completed the internship course in the Summer Semester of Academic Year 2023-2024. The survey was conducted using MS Forms, which required approximately ten (10) minutes to complete.

The research instrument was divided into seven (7) parts: (a) personal details and information about the Host Training Establishments; (b) experiences during the internship; (c) students' perceived industry readiness during the internship; (d) student interns' application of skills during their internship; (e) student interns' perception of the relevance of the BS Economics curriculum; (f) proposed curriculum revisions; and (g) questions regarding the presence of PUP graduates.

Given the study's objective of evaluating the program and informing curriculum improvements, descriptive and comparative analyses were selected as the most suitable methods for identifying patterns in student internship experiences and perceived learning outcomes.

2. Methodology

This study employs a quantitative approach to describe student-interns' actual experiences, their industry readiness and application of skills, and the curriculum relevance of the PUP BS Economics program. After completing the questionnaire, information was gathered, tabulated, and processed using SPSS. Mean, standard deviation, frequency, and percentages were utilized for descriptive statistics, while a t-test was applied for inferential statistics at the 0.05 level of significance to derive meaningful analysis from the conducted survey. For interpreting the level of perceived industry readiness, the following scale and description were used as shown in Table 1:

Table 1

Scale Description and Interpretation for Student-interns' Level of Perceived Industry-readiness

Scale	***Description***	***Interpretation***
1.00-1.80	Strongly Disagree	I do not feel industry-ready at all
1.81-2.60	Disagree	I feel slightly unprepared for industry demands
2.61-3.40	Neutral	I feel somewhat prepared but still unsure
3.41-4.20	Agree	I feel mostly prepared for industry expectations
4.21-5.00	Strongly Agree	I feel fully confident and industry-ready

For the level of perceived application of skills during their internship, the following scale and description were used as shown in Table 2:

Table 2

Scale Description and Interpretation for Student-Interns' Level of Perceived Application of Skills During Internship

Scale	***Description***	***Interpretation***
1.00-1.80	Strongly Disagree	I do not demonstrate this skill at all
1.81-2.60	Disagree	I rarely demonstrate this skill effectively
2.61-3.40	Neutral	I sometimes demonstrate this skill

3.41-4.20	Agree	I often demonstrate this skill effectively
4.21-5.00	Strongly Agree	I consistently demonstrate this skill with confidence

For the level of perceived relevance of academic courses and subjects on their internship, the following scale and description were used as shown in Table 3:

Table 3

Scale Description and Interpretation for Student-Interns' Level of Perceived Relevance of BS Economics Academic Courses and Subjects

Scale	***Description***	***Interpretation***
1.00-1.80	Not relevant	The subject had no relevance to my internship tasks
1.81-2.60	Slightly relevant	The subject was rarely helpful to my internship tasks
2.61-3.40	Moderately relevant	The subject was sometimes helpful to my internship tasks
3.41-4.20	Relevant	The subject was often useful during my internship
4.21-5.00	Highly relevant	The subject was very helpful and applicable to my internship tasks

Note: All data and analysis codes are available upon request.

Furthermore, this study also draws on self-reported perceptions from student interns, which may be influenced by response bias and social-desirability tendencies. Although self-assessment is commonly used in internship and employability research, future investigations may strengthen analytical rigor and causal interpretation by triangulating results with employer evaluations, supervisor assessments, or post-internship employment data.

3. Results

Table 4 indicates that most PUP BS Economics student-interns completed their internships in onsite settings, reflecting the continued preference of host training establishments for face-to-face arrangements. This preference underscores the value of in-person mentorship, workplace immersion, and interpersonal learning, which prior studies associate with stronger skill development and professional socialization (Gault et al., 2010; Narayanan et al., 2010). At the same time, the presence of hybrid and online internship arrangements suggests a gradual openness to more flexible work modalities, likely influenced by post-pandemic adjustments and technological advancements (Jeske & Axtell, 2016). These findings indicate that while traditional onsite internships remain dominant, integrating selected remote tasks and digital collaboration tools may enhance interns' adaptability and preparedness for evolving workplace conditions.

Table 4

Pre-Internship and Onboarding Experience of PUP BS Economics Students

Survey Questions	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
What job arrangement is suitable for your company/agency's internship program?	Hybrid (Onsite and Online)	19	15.2	15.2	15.2
	Purely Onsite	104	83.2	83.2	98.4
	Purely Online	2	1.6	1.6	100.0
	Total	125	100.0	100.0	
Does the HTE discuss the company's mission, vision, goals, and objectives?	No	4	3.2	3.2	3.2
	Yes	121	96.8	96.8	100.0
	Total	125	100.0	100.0	
Does the HTE have an orientation on its organizational structure?	No	6	4.8	4.8	4.8
	Yes	119	95.2	95.2	100.0
	Total	125	100.0	100.0	
	No	14	11.2	11.2	11.2

Does the HTE discuss the expected learning outcomes when you begin your internship?	Yes	111	88.8	88.8	100.0
	Total	125	100.0	100.0	

The findings indicate that most host training establishments provided interns with clear orientation on organizational mission, structure, and expected learning outcomes, reflecting strong onboarding practices. Such orientation helps interns develop a sense of alignment and purpose, which has been shown to enhance engagement and performance (Bauer & Erdogan, 2011). Clear articulation of learning objectives also supports more effective internship experiences and higher intern satisfaction (Weible, 2010). In this context, the PUP OJT Coordinator and OJT advisers may further strengthen partnerships with host institutions by supporting the development of well-defined internship learning outcomes that are closely aligned with organizational roles and responsibilities.

The results indicate that most PUP BS Economics student-interns received structured supervision, mentorship, and performance evaluation during their internships, suggesting a generally supportive learning environment within host training establishments. Prior research emphasizes that regular and formative feedback is essential for continuous learning, as it enables interns to adjust their performance in line with expected outcomes and workplace standards (Gault et al., 2010). While end-of-internship evaluations provide summative assessment, more frequent feedback supports learning agility and skill development by offering timely guidance (Sweitzer & King, 2013). In this regard, host training establishments are encouraged to adopt regular feedback mechanisms, while the University may support these efforts through mentor development and training programs to further enhance the quality of internship supervision.

The findings further indicate that many host training establishments regularly conduct office meetings, providing student interns with exposure to professional communication, coordination, and decision-making processes. Regular participation in such meetings helps interns understand organizational workflows and develop workplace communication skills (Linn et al., 2004). Actively involving interns in meetings through assigned roles or presentations can further enhance their professional confidence and engagement. In addition, the availability of adequate facilities and resources within host institutions supports more effective internship experiences by enabling interns to perform tasks in conditions similar to future work environments. Well-resourced workplaces have been shown to enhance learning, motivation, and task execution, thereby strengthening the overall impact of internship programs (Narayanan et al., 2010).

Table 5

Actual Internship Job Experience of PUP BS Economics Students

Survey Questions	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Does the HTE have someone to supervise you during the internship?	No	0	0.0	0.0	0.0
	Yes	125	100.0	100.0	100.0
	Total	125	100.0	100.0	
Is someone from the HTE able to mentor you during your internship?	No	2	1.6	1.6	1.6
	Yes	123	98.4	98.4	100.0
	Total	125	100.0	100.0	
Is someone from the HTE evaluating your work and discussing it with you?	No	11	8.8	8.8	8.8
	Yes	114	91.2	91.2	100.0
	Total	125	100.0	100.0	
	Daily	25	20.0	20.0	20.0

How often does the HTE representative evaluate your work and discuss it with you?	Monthly	1	.8	.8	20.8
	None at all	11	8.8	8.8	29.6
	At the end of the internship	38	30.4	30.4	60.0
	Weekly	50	40.0	40.0	100.0
	Total	125	100.0	100.0	
Does your chosen HTE unit/office/group have a regular meeting?	No	32	25.6	25.6	25.6
	Yes	93	74.4	74.4	100.0
	Total	125	100.0	100.0	
How often does your chosen HTE unit/office/group conduct a meeting?	Never	9	7.2	7.2	7.2
	Daily	9	7.2	7.2	14.4
	Once a month	20	16.0	16.0	30.4
	Twice a month	14	11.2	11.2	41.6
	Twice a week	19	15.2	15.2	56.8
	Weekly	54	43.2	43.2	100.0
	Total	125	100.0	100.0	
Do you believe that your chosen HTE is well-equipped in terms of physical facilities to provide internship programs?	No	15	12.0	12.0	12.0
	Yes	110	88.0	88.0	100.0
	Total	125	100.0	100.0	

Moreover, Table 5 indicates that PUP BS Economics student-interns generally perceived themselves as industry-ready at the start of their internships, reflecting strong preparation in essential soft skills and professional values. High levels of confidence in work ethic, ethical practice, teamwork, adaptability, time management, and problem-solving suggest that students possess competencies widely recognized as critical for workplace success. These results align with employer-oriented research emphasizing the importance of ethical behavior, collaboration, and adaptability, particularly in post-pandemic labor markets (Succi & Canovi, 2020). The findings further support the role of higher education institutions in fostering students' personal and professional development prior to workforce entry (Robles, 2012).

Despite generally high levels of perceived industry readiness, the findings indicate areas where student-interns may benefit from further development, particularly in entrepreneurship, leadership, communication, and the practical application of academic knowledge. These competencies are essential for career advancement but are often less emphasized in early workplace experiences. To address these gaps, the BS Economics program may strengthen curricular and co-curricular initiatives by integrating entrepreneurship-focused modules, leadership development activities, and applied learning opportunities. Partnerships with online learning platforms offering micro-credentials in communication and leadership, as well as increased alumni engagement through mentoring, career talks, and mock interviews, may further support students' professional growth and labor-market preparedness.

Table 6

Students' Perceived Industry Readiness based on their Experiences during their Internship

Industry-Readiness Statements	N	Min	Max	Std. Deviation	Mean	Statistical Interpretation
I have the necessary entrepreneurial skills to start my own business.	125	1	5	.912	3.51	Agree
I have sufficient knowledge of industry trends and developments.	125	2	5	.787	3.84	Agree

I am prepared to take on leadership roles.	125	2	5	.848	3.88	Agree
I am confident in my ability to market my skills to potential employers.	125	2	5	.816	3.94	Agree
I possess the necessary technical skills required by industries in my field.	125	2	5	.783	4.00	Agree
I believe my education has prepared me well for the workforce.	125	2	5	.798	4.01	Agree
I am confident in my ability to apply theoretical knowledge to real-world problems.	125	2	5	.686	4.07	Agree
I have strong communication and interpersonal skills.	125	2	5	.852	4.09	Agree
I am aware of the challenges and opportunities in my chosen field.	125	2	5	.729	4.13	Agree
I am confident in my ability to solve problems and make decisions.	125	2	5	.692	4.25	Strongly Agree
I possess good time management and organizational skills.	125	2	5	.674	4.42	Strongly Agree
I am adaptable to change and can learn new skills quickly.	125	2	5	.655	4.47	Strongly Agree
I am able to work effectively in a team environment.	125	2	5	.655	4.50	Strongly Agree
I possess the necessary ethical standards for professional practice.	125	2	5	.558	4.57	Strongly Agree
I have a strong work ethic and am committed to excellence.	125	2	5	.566	4.61	Strongly Agree
Student Industry-Readiness					**4.1509**	Agree

Interpretation:

1.00-1.80	Strongly Disagree (I do not feel industry-ready at all)
1.81-2.60	Disagree (I feel slightly unprepared for industry demands)
2.61-3.40	Neutral (I feel somewhat prepared but still unsure)
3.41-4.20	Agree (I feel mostly prepared for industry expectations)
4.21-5.00	Strongly Agree (I feel fully confident and industry-ready)

Table 7 suggests that BS Economics student-interns actively applied a wide range of academic and professional skills during their internships, reflecting high levels of preparedness, adaptability, and workplace maturity. Students demonstrated strong competencies in self-regulation, collaboration, professionalism, time management, and adaptability—skills widely recognized as essential for career success in contemporary labor markets (Jackson, 2015). These results underscore the practical value of internships in reinforcing core employability skills developed through university education.

At the same time, comparatively lower application of leadership, conflict management, data analysis, research, and public communication skills indicates that opportunities to practice higher-order cognitive and managerial competencies remain limited within many internship settings. This pattern suggests the need for more deliberate integration of leadership and communication tasks within internship programs, as well as complementary academic and co-curricular activities that provide students with structured opportunities to develop these advanced skills.

Despite generally positive skill application, the findings reveal persistent gaps in higher-level

cognitive and communication competencies, particularly in leadership, negotiation, and public speaking. These skills are widely recognized as essential yet remain underdeveloped among graduates, largely due to limited opportunities for practice in structured, feedback-rich workplace environments (Robles, 2012). From an experiential learning perspective, internships support learning through direct engagement and reflection, which may explain students' stronger performance in technical and task-oriented competencies (Kolb, 1984). However, the limited exposure to leadership and persuasive communication tasks suggests a need for more intentional design of internship activities and academic support mechanisms that allow students to practice and refine these advanced skills.

Table 7

BS Economics Student-Interns' Application of Skills during their Internship

Statements on Student-Intern Application of Skills	N	Min	Max	Std. Deviation	Mean	Statistical Interpretation
I can lead and motivate others.	125	2	5	.771	3.90	Agree
I can negotiate and resolve conflicts.	125	2	5	.756	4.04	Agree
I can analyze data and draw meaningful conclusions.	125	2	5	.644	4.06	Agree
I can effectively present information to an audience.	125	2	5	.732	4.07	Agree
I have strong research and information-gathering skills.	125	2	5	.696	4.09	Agree
I can think creatively and generate new ideas.	125	2	5	.691	4.12	Agree
I possess the necessary technical knowledge for my internship role.	125	2	5	.730	4.18	Agree
I possess the necessary technical skills for my internship role.	125	2	5	.737	4.19	Agree
I can manage stress and maintain a positive attitude.	125	2	5	.779	4.22	Strongly Agree
I can understand and respond to the emotions of others.	125	2	5	.662	4.26	Strongly Agree
I have a basic understanding of business operations and financial concepts.	125	2	5	.614	4.27	Strongly Agree
I can effectively manage and prioritize projects.	125	2	5	.590	4.28	Strongly Agree
I am able to solve problems and find solutions.	125	2	5	.590	4.32	Strongly Agree
I have a good understanding of the industry and company I am interning with.	125	2	5	.666	4.37	Strongly Agree
I am able to communicate effectively both verbally and in writing.	125	2	5	.645	4.38	Strongly Agree
I am proactive and take initiative in my work.	125	2	5	.693	4.38	Strongly Agree
I am a quick learner and can adapt to new situations.	125	2	5	.639	4.43	Strongly Agree
I pay attention to detail and produce high-quality work.	125	2	5	.640	4.44	Strongly Agree
I can manage my time effectively and prioritize tasks.	125	2	5	.617	4.50	Strongly Agree

I am adaptable to change and can handle new challenges.	125	2	5	.591	4.50	Strongly Agree
I can work well independently and as part of a team.	125	2	5	.590	4.53	Strongly Agree
I am aware of my strengths and weaknesses.	125	2	5	.589	4.54	Strongly Agree
I am motivated to achieve my goals.	125	2	5	.710	4.58	Strongly Agree
I demonstrate professionalism in my interactions with colleagues.	125	2	5	.555	4.59	Strongly Agree
Application of Skills					**4.30**	**Strongly Agree**

Interpretation:

1.00-1.80 Strongly Disagree (I do not demonstrate this skill at all)
1.81-2.60 Disagree (I rarely demonstrate this skill effectively)
2.61-3.40 Neutral (I sometimes demonstrate this skill)
3.41-4.20 Agree (I often demonstrate this skill effectively)
4.21-5.00 Strongly Agree (I consistently demonstrate this skill with confidence)

The findings also indicate that student-interns perceived communication-focused and core economics courses as the most relevant to their internship tasks, underscoring the importance of writing, analytical reasoning, and economic thinking in professional settings. Courses emphasizing written communication and applied economics appear particularly valuable in supporting tasks such as report writing, data analysis, and engagement with policy and organizational processes. In contrast, mathematics and general education subjects were viewed as moderately relevant, suggesting either limited application in entry-level internship roles or a need for stronger integration of these courses with applied economic contexts.

From an experiential learning perspective, the relevance of academic courses is enhanced when theoretical content aligns with workplace tasks, allowing students to apply knowledge through real-world practice (Kolb, 1984). The strong valuation of communication-oriented courses is consistent with employer expectations that emphasize clarity, professionalism, and effective written expression as key graduate attributes (Jackson, 2015). While general education subjects may appear less directly applicable to internship activities, they continue to play an important role in fostering critical thinking, ethical awareness, and civic understanding. Overall, the findings suggest that curriculum design should prioritize applied integration across disciplines to maximize the contribution of academic coursework to internship learning outcomes.

Table 8

Perceived Relevance of PUP BS Economics Academic Courses/Subjects

Academic Courses/ Subjects	N	Min	Max	Std. Deviation	Mean	Statistical Interpretation
General Education						
Art Appreciation	125	1	5	1.131	2.06	Slightly Relevant
Buhay at mga Sinulat ni Rizal	125	1	5	1.212	2.09	Slightly Relevant
Readings in Philippine History	125	1	5	1.417	2.46	Slightly Relevant
Panitikang Filipino	125	1	5	1.305	2.48	Slightly Relevant
Pagsasalin sa Kontekstong Filipino	125	1	5	1.348	2.51	Slightly Relevant
Intelektwalisasyon sa Wikang Filipino	125	1	5	1.291	2.58	Slightly Relevant
World Literature	125	1	5	1.203	2.67	Moderately Relevant
Filipinolohiya at Pambansang Kaunlaran	125	1	5	1.303	2.70	Moderately Relevant

The Contemporary World	125	1	5	1.235	3.08	Moderately Relevant
Science, Technology and Society	125	1	5	1.233	3.42	Relevant
Mathematics in the Modern World	125	1	5	1.274	3.49	Relevant
Understanding the Self	125	1	5	1.224	3.66	Relevant
Living in the Information Technology Era	125	1	5	.932	4.05	Relevant
Ethics	125	1	5	1.024	4.09	Relevant
Politics, Governance, and Citizenship	125	1	5	.947	4.25	Highly Relevant
Purposive Communication	125	1	5	.725	4.50	Highly Relevant
GENERAL EDUCATION COURSES AVERAGE MEAN					3.13	Moderately Relevant
Mathematics Courses						
Integral Calculus	125	1	5	1.401	3.19	Moderately Relevant
Differential Calculus	125	1	5	1.392	3.23	Moderately Relevant
Algebra and Trigonometry	125	1	5	1.349	3.33	Moderately Relevant
MATHEMATICS COURSES AVERAGE MEAN					3.25	Moderately Relevant
English Courses						
Technical Writing	125	1	5	.838	4.46	Highly Relevant
ENGLISH COURSES AVERAGE MEAN					4.46	Highly Relevant
Economics Courses						
History of Economic Thought	125	1	5	1.322	3.69	Relevant
Econometrics	125	1	5	1.207	3.86	Relevant
Mathematical Economics	125	1	5	1.149	3.95	Relevant
Economic Research and Report Writing	125	1	5	1.149	4.05	Relevant
Mathematical Statistics for Economics	125	1	5	1.137	4.07	Relevant
International Economics	125	1	5	.992	4.20	Relevant
Introductory Economics	125	1	5	.968	4.23	Highly Relevant
Microeconomics	125	1	5	.907	4.30	Highly Relevant
Economics Development	125	1	5	.944	4.35	Highly Relevant
Public Economics	125	1	5	.949	4.38	Highly Relevant
Macroeconomics	125	2	5	.825	4.42	Highly Relevant
Monetary Economics	125	2	5	.838	4.47	Highly Relevant
ECONOMICS COURSES AVERAGE MEAN					4.16	Relevant

Interpretation:

1.00-1.80 Not Relevant (The subject had no relevance to my internship tasks)
1.81-2.60 Slightly Relevant (The subject was rarely helpful to my internship tasks)
2.61-3.40 Moderately Relevant (The subject was sometime helpful to my internship tasks)
3.41-4.20 Relevant (The subject was often useful during my internship)
4.21-5.00 Highly Relevant (The subject was very helpful and applicable to my internship tasks)

Additional findings as shown in Table 8 suggest that BS Economics students place the greatest value on technical knowledge, economic reasoning, and communication skills in real-world internship settings. Strengthening instructional offerings in technical documentation, report writing, data storytelling, and applied communication may further enhance students' ability to translate academic learning into workplace performance. Encouraging cross-disciplinary and student-centered activities that integrate economics with communication and analytical skills can reinforce this alignment. While general education courses may appear less directly connected to internship tasks, they remain essential for developing critical thinking, ethical awareness, and well-rounded professional judgment. Ensuring coherence between theory and practice across the

curriculum can therefore maximize the learning benefits of internship experiences.

In addition, the analysis indicates that perceived industry readiness does not significantly differ across internship contexts, including employer type, organizational size, work arrangement, commute conditions, or internship duration as shown in Table 9. This pattern suggests that students' sense of preparedness is shaped more by academic preparation and the quality of internship design than by logistical or institutional factors. Notably, extending internship hours beyond the minimum requirement does not appear to enhance readiness, reinforcing the importance of structured tasks, supervision, and learning outcomes over duration alone. The absence of differences between onsite and hybrid arrangements further indicates that flexible internship models can be equally effective, provided that learning experiences are intentionally designed—an important consideration in post-pandemic educational and workplace environments.

Table 9

Test of Difference in the BS Economics Student-Interns' Perceived Industry Readiness when grouped according to Type of Employer, Host Training Establishments' Company Size, Travel and Commute Arrangement, Completed Internship Hours, and Type of Job Arrangement

Categories	Mean	df	t-value	Prob. (2-tailed)	Statistical Interpretation
Type of Employer					
Public/Government	4.1434	123	-0.341	0.734	No significant difference
Private/NGO	4.1675				
Host Training Establishments' Company Size					
1 to 199 Employees	4.0956	123	-1.276	0.204	No significant difference
200 Employees and Above	4.1821				
Travel and Commute Arrangement					
Less than an hour	4.1153	123	-1.067	0.288	No significant difference
More than an hour	4.1849				
Completed Internship Hours					
Exactly 200 hours	4.1302	123	-0.544	0.588	No significant difference
More than 200 hours	4.1662				
Type of Job Arrangement					
Purely Onsite	4.1619	123	0.744	0.458	No significant difference
Hybrid (Online/Onsite)	4.0968				

The analysis indicates that the application of skills during internships is largely consistent across employer types, work arrangements, commute conditions, and internship duration, suggesting that students can develop comparable competencies in diverse internship contexts. However, interns placed in larger host organizations demonstrated stronger skill application, likely due to greater access to resources, structured supervision, and more varied task assignments. This finding suggests that organizational capacity plays an important role in shaping the depth of learning opportunities available to interns.

At the same time, the absence of meaningful differences across most internship conditions reinforces the view that skill development is influenced more by internship design than by logistical factors such as location, duration, or modality. Elements such as mentorship quality, clarity of roles, supervision, and task variety appear to be more critical determinants of meaningful skill application than the number of

hours completed or whether the internship is conducted onsite or in hybrid formats. These insights highlight the importance of prioritizing internship quality and institutional partnerships in designing programs that effectively support student learning and employability.

The findings indicate that organizational capacity, particularly company size, plays a more influential role in shaping interns' skill application than logistical factors such as employer type, commute time, internship duration, or work arrangement. This suggests that the quality and scope of internship experiences—rather than their format or length—are central to effective skill development. Consistent with prior research, well-structured internships that provide meaningful tasks and supervision contribute more to employability outcomes than logistical considerations alone (Jones & Hoare, 2017; Gault et al., 2000). From a labor-market perspective, these results further suggest that productivity-enhancing skills can be developed through intentional internship design without extending training duration, supporting efficiency-oriented approaches to workforce preparation.

Table 10

Test of Difference in the BS Economics Student-Interns' Application of Skills during their Internship when grouped according to Type of Employer, Host Training Establishments' Company Size, Travel and Commute Arrangement, Completed Internship Hours, and Type of Job Arrangement

Categories	Mean	Df	t-value	Prob. (2-tailed)	Statistical Interpretation
Type of Employer					
Public/Government	4.2762	123	-0.929	0.355	No significant difference
Private/NGO	4.3579				
Host Training Establishments' Company Size					
1 to 199 Employees	4.1704	123	-2.466	0.015	Statistically significant
200 Employees and Above	4.3755				
Travel and Commute Arrangement					
Less than an hour	4.2370	123	-1.558	0.122	No significant difference
More than an hour	4.3633				
Completed Internship Hours					
Exactly 200 hours	4.2752	123	-0.557	0.579	No significant difference
More than 200 hours	4.3212				
Type of Job Arrangement					
Purely Onsite	4.3249	123	1.273	.205	No significant difference
Hybrid (Online/Onsite)	4.1865				

Student-interns also expressed strong support for revising the structure and scheduling of the internship course, particularly by offering it during regular semesters and as a stand-alone subject to allow greater focus on field-based learning. While many interns favored extending the required number of internship hours, the analysis indicates that longer duration does not necessarily lead to higher levels of industry readiness or skill application. This suggests that internship effectiveness depends more on the quality of learning experiences than on the number of hours completed. In this context, the PUP Department of Economics may consider maintaining the current hour requirement while prioritizing improved scheduling, structured supervision, and clearly defined learning outcomes to maximize the educational value of the internship.

Table 11

Perception on the Possible Changes in the Offering of the Internship Course for BS Economics Students

Survey Questions	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Do you agree that the internship course must be taken during regular semesters (First Semester; Second Semester)?	No	47	37.6	37.6	37.6
	Yes	78	62.4	62.4	100.0
	Total	125	100.0	100.0	
Do you believe that the 200-hour requirement of internship course must be increased?	No	27	21.6	21.6	21.6
	Yes	98	78.4	78.4	100.0
	Total	125	100.0	100.0	
What is the ideal number of hours to ensure student-interns' learning and skill development during internship?	200 hours	25	20.0	20.0	20.0
	250 hours	12	9.6	9.6	29.6
	300 hours	49	39.2	39.2	68.8
	More than 300 hours	39	31.2	31.2	100.0
	Total	125	100.0	100.0	
Do you agree that the internship program course shall be offered solely for a semester to avoid conflicts with other academic courses?	No	13	10.4	10.4	10.4
	Yes	112	89.6	89.6	100.0
	Total	125	100.0	100.0	

The findings also indicate that many student-interns were aware of the presence of PUP alumni within their host training establishments, highlighting the potential role of alumni as an important support mechanism during internships. Alumni can function as informal mentors and social bridges, helping interns navigate organizational culture, access guidance, and build professional networks. Prior research suggests that such mentoring relationships contribute positively to student adjustment and professional development, particularly within higher education–to–work transitions (Curtin et al., 2016). These results underscore the value of alumni engagement as a strategic component of internship programs.

Table 12

Presence of PUP Graduates in the Host Training Establishments (HTEs)

Survey Questions	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Do you know someone from the HTE/company/agency who is a graduate or an alumnus of the Polytechnic University of the Philippines?	No	47	37.6	37.6	37.6
	Yes	78	62.4	62.4	100.0
	Total	125	100.0	100.0	

Beyond informal support, alumni within host training establishments may also positively influence supervisors' perceptions of student-interns by advocating for them and contextualizing their academic preparation. Research on mentor–protégé similarity suggests that shared backgrounds, such as alma mater, can enhance trust, communication, and professional development outcomes (Allen et al., 2005). In this context, the University and the PUP Department of Economics may consider systematic alumni mapping to identify organizations employing BS Economics graduates. Engaging these alumni as mentors, speakers, or resource persons in student-focused activities can

further strengthen internship support structures and enhance students' professional socialization.

4. Discussion

This study examined the perceived industry readiness, application of skills, and relevance of academic coursework among BS Economics student-interns of the Polytechnic University of the Philippines, as well as the differences in these measures across internship conditions. The findings generally indicate that the internship program contributes positively to students' professional preparation and employability development.

The results revealed that most student-interns experienced structured onboarding, mentorship, supervision, and performance evaluation within their host training establishments. These findings suggest that host organizations provided supportive learning environments that facilitated workplace adjustment and professional socialization. Consistent with Bauer and Erdogan (2011), effective onboarding practices enhance employee engagement and role clarity, while structured supervision and regular feedback strengthen experiential learning outcomes. Similarly, Gault et al. (2010) emphasized that meaningful mentorship and workplace immersion improve students' professional competencies and readiness for employment. The predominance of onsite internship arrangements further supports the continuing importance of face-to-face workplace exposure in developing interpersonal and organizational skills. However, the presence of hybrid internship arrangements also reflects the growing acceptance of flexible work modalities in contemporary organizations, particularly in post-pandemic settings.

The study further found that BS Economics student-interns generally perceived themselves as industry-ready, particularly in areas related to professionalism, teamwork, adaptability, ethics, and work commitment. These competencies are widely recognized as essential employability skills in modern labor markets (Robles, 2012; Succi & Canovi, 2020). From the perspective of Human Capital Theory, the findings suggest that investments in higher education and internship training contribute positively to the development of productive workplace competencies. Likewise, Bandura's Social Learning Theory helps explain how exposure to workplace environments, mentors, and organizational practices may reinforce students' confidence and behavioral adaptation. Nonetheless, relatively lower ratings in entrepreneurship, leadership, and communication-related competencies indicate areas where students remain less confident. This suggests that while the curriculum effectively develops foundational employability skills, opportunities for leadership practice, entrepreneurial thinking, and persuasive communication may still be limited within both academic and internship environments.

The findings regarding students' application of skills during internship similarly demonstrate strong development of professionalism, time management, adaptability, teamwork, and initiative. These results reinforce prior literature emphasizing the role of internships in strengthening practical employability competencies through experiential learning (Kolb, 1984; Jackson, 2015). Internships appear particularly effective in cultivating task-oriented and workplace behavioral skills because students engage directly with organizational responsibilities and professional expectations. However, competencies related to leadership, negotiation, conflict management, and public speaking received comparatively lower evaluations. This pattern suggests that many internship assignments may focus more heavily on operational support tasks rather than decision-making, strategic communication, or managerial responsibilities. Consequently, the University and host training establishments may consider designing internship activities that intentionally expose students to higher-order professional functions, including presentations, collaborative leadership roles, and problem-solving situations.

In terms of curriculum relevance, communication-oriented and core economics courses were perceived as the most applicable to internship tasks. Technical Writing, Macroeconomics, Monetary Economics, Public Economics, and Microeconomics were among the

subjects rated most relevant by the student-interns. These findings highlight the importance of analytical reasoning, report writing, and applied economic thinking in workplace settings. The results support existing literature emphasizing that employers increasingly value graduates who possess strong communication and analytical competencies alongside technical knowledge (Jackson, 2015). On the other hand, mathematics and several general education subjects were perceived as only moderately or slightly relevant to internship activities. Although these courses contribute to broader intellectual and civic development, the findings suggest a need to strengthen their applied integration within the Economics curriculum. Embedding more practical applications, case analyses, and industry-based examples into these subjects may improve students' appreciation of their relevance to workplace contexts.

The comparative analysis revealed no significant differences in perceived industry readiness across employer type, company size, commute conditions, internship duration, or work arrangement. Similarly, application of skills was generally consistent across internship conditions, except for company size, where larger organizations were associated with stronger skill application. These findings suggest that internship quality and organizational learning environments may be more influential than logistical factors such as duration or modality. Larger host organizations may provide broader exposure, more structured systems, and greater access to resources and mentorship, thereby enhancing opportunities for skill utilization and professional growth. The absence of significant differences based on internship duration also implies that extending internship hours alone may not necessarily improve employability outcomes. Rather, the quality of supervision, clarity of learning outcomes, and diversity of assigned tasks appear to be more critical determinants of meaningful internship experiences. These findings align with Jones and Hoare (2017), who argued that structured and purposeful internships are more beneficial than merely increasing training duration.

The findings also carry important implications for curriculum development and institutional policy. Student-interns strongly supported offering the internship course during a regular semester and as a stand-alone subject to minimize conflicts with academic coursework. This suggests that students perceive internship learning as requiring dedicated time and attention to maximize its benefits. The Department of Economics may therefore consider revisiting internship scheduling policies to improve students' learning experiences and reduce competing academic demands. In addition, the results support strengthening partnerships with larger host training establishments and expanding alumni engagement initiatives. The presence of PUP alumni within host organizations may contribute positively to mentorship, workplace adjustment, and professional networking opportunities for student-interns. Alumni involvement can therefore serve as a valuable institutional mechanism for enhancing internship support systems and strengthening university-industry collaboration.

Despite the positive findings, this study has several limitations. First, the study relied primarily on self-reported perceptions of student-interns, which may be influenced by response bias and social desirability tendencies. Although self-assessment is commonly utilized in internship and employability research, students may overestimate or underestimate their competencies and experiences. Second, the study focused exclusively on BS Economics student-interns from one public university, limiting the generalizability of the findings to other disciplines or institutions. Third, the quantitative design primarily captured descriptive and comparative trends and did not explore deeper qualitative insights regarding the nature of internship experiences. Finally, the study did not include employer evaluations, supervisor assessments, or post-internship employment outcomes that could provide stronger triangulation and causal interpretation of internship effectiveness. Future research may therefore incorporate mixed-method approaches, longitudinal tracking, and employer-based assessments to provide a more comprehensive understanding of internship outcomes and graduate employability.

5. Conclusion

This study contributes to the literature on internships and employability by offering program-level evidence on how structured internship experiences serve as a form of human capital development within a public university setting. Anchored in Human Capital Theory and Social Learning Theory, the findings show that internships significantly enhance students' industry readiness and practical skill application, particularly in key employability competencies such as professionalism, adaptability, teamwork, and ethical conduct. Notably, the results emphasize that the quality and design of internship experiences, rather than mere duration or logistical arrangements, are the primary drivers of meaningful learning outcomes.

From a policy and curriculum standpoint, the findings highlight the need to align academic programs with labor-market requirements through robust experiential learning opportunities. The results suggest that enriching the curriculum with components focused on leadership, entrepreneurship, and communication can strengthen existing competencies in economics and technical skills. Additionally, expanding partnerships with host training establishments, especially larger organizations with stronger mentorship capacity and more diverse task assignments, can improve students' opportunities to apply their skills. These insights reinforce evidence-based curriculum development and internship management practices that prioritize learning effectiveness over compliance with minimum hour requirements.

For public universities and state-funded higher education institutions, the study provides significant implications for enhancing graduate employability amid limited resources. By demonstrating that strong learning outcomes can be achieved through well-designed internships without extending training hours, the findings position internships as a cost-efficient strategy for workforce preparation. The results further underscore the value of alumni networks and institutional partnerships in facilitating students' transition into employment. Overall, the study affirms the strategic importance of internships in improving labor-market relevance, institutional accountability, and the broader role of higher education in national workforce development.

Recommendations

The findings of this study suggest that curriculum development within the BS Economics program should move beyond technical proficiency to more deliberately cultivate leadership, entrepreneurship, and communication competencies. While students demonstrate strong foundational and professional skills, the limited application of leadership, negotiation, and public speaking during internships indicates the need for targeted curricular modules and co-curricular activities that allow students to practice these higher-order competencies in applied settings. Embedding these skill areas within economics-related contexts can better prepare graduates for managerial and executive roles in both public and private institutions.

To further strengthen the connection between academic preparation and workplace demands, theoretical courses, particularly in mathematics and general education, may be more effectively aligned with economic applications and industry-relevant case studies. Situating abstract concepts within real-world economic problems can enhance students' ability to transfer academic knowledge to professional environments. Such integration reinforces experiential learning and ensures that all components of the curriculum contribute meaningfully to employability and workplace readiness.

With respect to internship design, the study supports offering the internship course as a stand-alone subject during regular semesters. Allowing students to focus exclusively on their internship experience, without the competing demands of other academic courses, can enhance engagement, reflection, and skill application. At the same time, the findings indicate that increasing internship hours alone does not necessarily lead to improved learning outcomes. Maintaining the current 200-hour requirement while prioritizing structured mentorship, regular performance feedback, and

diverse task assignments is likely to be a more effective and resource-efficient approach.

Institutional partnerships also play a critical role in maximizing internship outcomes. Strengthening collaborations with larger organizations can provide students with access to better-defined roles, greater responsibility, and more varied learning opportunities. Host training establishments are encouraged to implement consistent feedback mechanisms, involve interns in regular meetings, and conduct structured orientation programs that clearly communicate organizational goals, expectations, and learning outcomes. These practices can significantly enhance interns' sense of inclusion and professional development.

In addition, public universities such as the Polytechnic University of the Philippines may benefit from systematically identifying and engaging alumni employed in host training establishments. Alumni can serve as informal mentors, resource persons, and professional role models who help bridge academic learning and workplace realities. Complementing these efforts with partnerships with online learning platforms, such as LinkedIn Learning, can further support students' development through micro-credentials in communication, teamwork, project management, and other essential soft skills.

Finally, the findings of this study should be communicated to university administrators and policymakers to inform the design of internship-related policies and graduate employability strategies. Emphasizing internship quality, institutional partnerships, and curriculum alignment offers a cost-effective approach to workforce preparation, particularly for public universities operating under resource constraints. By focusing on these strategic areas, higher education institutions and policymakers can enhance the labor-market relevance of academic programs and support smoother school-to-work transitions across disciplines.

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